RIVERSIDE COMMUNITY COLLEGE DISTRICT

STEM CENTER MODULARS II PHASE B INTERIOR IT/DATA INSTALLATION AT NORCO COLLEGE

BID NO. 2014/15-04-UCCAP

RIVERSIDE COMMUNITY COLLEGE DISTRICT PURCHASING

Majd Askar, Purchasing Manager
1533 Spruce St
Riverside, CA 92507
951-222-8444 / 951-222-8022, FAX
majd.askar@rccd.edu

MANDATORY JOB WALK

July 2, 2014 at 9:00 a.m.
Norco College
2001 3rd St, Norco, CA 928606
(MEET AT THE STEM CENTER PARKING LOT)

BID CLOSING

July 8, 2014, NO LATER THAN 2:00 P.M.
Riverside Community College District Systems Office
Purchasing Department
450 E. Alessandro Blvd, Riverside, CA 92508
Please note change of address

***** ALL QUESTIONS MUST BE EMAILED/FAXED, IN WRITING, TO THE PURCHASING DEPARTMENT *****

RIVERSIDE COMMUNITY COLLEGE DISTRICT

STEM CENTER MODULARS II PHASE B INTERIOR IT/DATA INSTALLATION AT NORCO COLLEGE
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** Performance & Payment Bonds are required for public works projects costing $25,000 or more (Civil Code Section 3247-3252).*

NOTICE INVITING BIDS

STEM CENTER MODULARS II PHASE B INTERIOR IT/DATA INSTALLATION AT NORCO COLLEGE
BID NO 2014/15-04-UCCAP

BID DEADLINE: **NO LATER THAN 2:00 P.M. ON JULY 8, 2014**

Any bids received after the time specified above, or after any extensions due to material changes, shall be returned unopened.

PLACE OF BID RECEIPT: Riverside Community College District Systems Office
Purchasing Department
450 E. Alessandro Blvd, Riverside, CA 92508
Please note new location

All bids shall be made and presented only on the forms presented by the school district. All Bids must be time stamped by the Purchasing time clock no later than the time stated above. All Bids will be publicly opened and read immediately thereafter, at the above physical address in the **Purchasing Conference Room**.

Project Identification Name: STEM Center Modulars II Phase B Interior IT/Data Installation at Norco College
BID NO. 2014/15-04-UCCAP

Project Description: All low voltage raceways & outlet boxes have been installed under a separate project. The Contractor shall bid the complete installation of the following: 1) All data equipment, outlets & cabling per book specifications section **16740 (DATA).**. 2) All data equipment, backboards, outlets & cabling per Electrical Drawings E-1.0. 3)All communications outlets, devices & cabling per Electrical Drawings E-1.0.

Plans are available: Bid Documents are available upon request by emailing RCCD Purchasing Department at melissa.elwood@rccd.edu Contractor is responsible for printing plans, specs and bid docs.

Contractor's License Classification Required: **C10**

NOTICE IS HEREBY GIVEN that the Governing Board of the Riverside Community College District, hereinafter referred to as "DISTRICT", is calling for and will receive sealed bids for the award of a contract for the above project up to, but not later than, the above-stated time.

Bids shall be received in the place identified above, and shall be opened and publicly read aloud at the above-stated time and place.

There will be no-charge to obtain a set of bid documents. No partial sets will be available.

There will be a **mandatory** Pre-Bid Conference on **July 2, 2014 at 9:00 AM.,** beginning at the Norco College STEM Center Parking Lot located at 2001 3rd St, Norco, CA 92860. During the Pre-Bid Conference the state labor law requirements applicable to this Project will be discussed.

Each bid must strictly conform with and be responsive to the contract documents as defined in the General Conditions.

District Standards: In accordance with California Public Contract Code section 3400, the District has made a finding that particular materials, products, things, and/or services are to be designated in the Contract Documents by specific brand or trade name for the following purpose: in order to match other products in use on a particular public improvement either completed or in the course of completion ("District Standards"). The District Standards are designated elsewhere in the Contract Documents.

The DISTRICT reserves the right to reject any or all bids or to waive any irregularities or informalities in any bids or in the bidding.

Each bidder shall submit with the bid, on the form furnished with the contract documents, a list of the designated subcontractors on this project as required by the Subletting and Subcontracting Fair Practices Act, California Public Contract Code Sections 4100 et. seq.

In accordance with California Public Contract Code Section 22300, the DISTRICT will permit the substitution of securities for any moneys withheld by the DISTRICT to ensure performance under the contract. At the request and expense of the CONTRACTOR, securities equivalent to the amount withheld shall be deposited with the DISTRICT, or with a state or federally chartered bank as the escrow agent, who shall then pay such moneys to the CONTRACTOR. Upon satisfactory completion of the contract, the securities shall be returned to the CONTRACTOR.

Each bidder's bid must be accompanied by one of the following forms of bidder's security: (1) cash; (2) a cashier's check made payable to the DISTRICT; (3) a certified check made payable to the DISTRICT; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure Section 995.120, made payable to the DISTRICT in the form set forth in the contract documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of bid as a guarantee that the bidder will enter into the proposed contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds and insurance certificates. In the event of failure to enter into said contract or provide the necessary documents, said security will be forfeited.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids. All withdrawals must be in writing.

Separate payment and performance bonds, each in an amount equal to 100% of the total contract amount, are required, and shall be provided to the DISTRICT prior to execution of the contract and shall be in the form set forth in the contract documents.

All bonds (Bid, Performance, and Payment) must be issued by a California admitted surety as defined in California Code of Civil Procedure Section 995.120.

Any request for substitutions pursuant to Public Contracts Code Section 3400 must be made on the form set forth in the contract documents and included with the bid.

No telephone or facsimile machine will be available to bidders on the DISTRICT premises at any time.

It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

License Requirements: Each bidder shall be a licensed contractor pursuant to the California Business and Professions Code, and be licensed to perform the work called for in the contract documents. The successful bidder must possess a valid and active **Class C10 License** at time of award of contract. The Contractor's California State License number shall be clearly stated on the bidder's proposal. Subcontractors shall be licensed pursuant to California law for the trades necessary to perform the work called for in the contract documents at the time bids are opened by the DISTRICT.

The successful contractor and all of its subcontractors for the Project will be required to attend a **mandatory** Pre-Job Conference before commencing work. The successful contractor or any of its designated subcontractors shall not perform any work on the Project prior to attending the Pre-Job Conference and executing the appropriate certification. The District will not process any payment applications for any work by the contractor or any subcontractor that does not attend the Pre-Job Conference and execute the certification.

Prevailing Wages: This is a public works project. The project is limited to the scope of work defined on the plans and in the specifications. In accordance with the provisions of Sections 1770 and 1773 of the Labor Code, the Director of the Department of Industrial Relations has determined the general prevailing rate of wages applicable to the work to be done. These rates are set forth in a schedule located at the State Department of Industrial Relations, Director of Industrial Relations. This schedule is available to any interested party on request. Attention is directed to the provisions of Sections 1777.5 and 1777.6 of the Labor Code of the State of California concerning employment of apprentices by the contractor or a subcontractor. Each prime contractor and all subcontractors are responsible for compliance with the requirements of Sections 1777.5 and 1777.6.

INSTRUCTIONS TO BIDDERS

1. Preparation of Bid Form. Proposals under these specifications shall be submitted on the blank forms furnished herewith at the time and place stated in the Notice Inviting Bids. All blanks in the bid form must be appropriately filled in, and all proposed prices must be stated clearly and legibly in both words and numerals. All bids must be signed by the bidder in permanent blue ink and submitted in sealed envelopes, bearing on the outside, the bidder's name, address, telephone number, and California Contractor's License number, and the name of the project for which the bid is submitted. The DISTRICT reserves the right to reject any bid if all of the above information is not furnished. Any bid received after the scheduled closing time for receipt of bids will be returned to the bidder unopened. It is each bidder's sole responsibility to ensure its bid is timely delivered and received at the location designated as specified above. Any bid received at the designated location after the scheduled closing time for receipt of bids shall be returned to the bidder unopened.

2. Bid Security. Each bid must be accompanied by one of the following forms of bidder's security: (1) cash; (2) a cashier's check made payable to the DISTRICT; (3) a certified check made payable to the DISTRICT; or (4) a bidder's bond executed by a California admitted surety as defined in Code of Civil Procedure Section 995.120, made payable to the DISTRICT, in the form set forth in the contract documents. Such bidder's security must be in an amount not less than ten percent (10%) of the maximum amount of such bidder's bid as a guarantee that the bidder will enter into the proposed contract, if the same is awarded to such bidder, and will provide the required Performance and Payment Bonds and insurance certificates. In the event that a bidder is awarded the contract and such bidder fails to enter into said contract or provide the necessary documents within ten (10) calendar days after notification of the award of the contract to bidder, said security will be forfeited.

3. Signature. The bid form, all bonds, all designations of subcontractors, the Contractor's Certificate, the Agreement, and all Guarantees must be signed in permanent blue ink in the name of the bidder and must bear the signature of the person or persons duly authorized to sign the bid.

If bidder is a corporation, the legal name of the corporation shall first be set forth, together with two signatures: one from the President and one from the Secretary or Assistant Secretary. Alternatively, the signature of other authorized officers or agents may be affixed, if a certified copy of the resolution of the corporate board of directors authorizing them to do so is on file in the DISTRICT's office. Such documents shall include the title of such signatories below the signature and shall bear the corporate seal.

If bidder is a partnership, the true name of the firm shall first be set forth, together with the names of all persons comprising the partnership or co-partnership. The bid must be signed by all partners comprising the partnership unless proof in the form of a certified

copy of a statement of partnership acknowledging the signer to be a general partner is presented to the DISTRICT, in which case the general partner may sign.

Bids submitted as joint venturers must so state and be signed by each joint venturer.

Bids submitted by individuals must be signed by the bidder unless an up to date power- of-attorney is on file in the DISTRICT office, in which case, said person may sign for the individual.

The above rules also apply in the case of the use of a fictitious firm name. In addition, however, where a fictitious name is used, it must be so indicated in the signature.

4. Modifications. Changes in or additions to the bid form, recapitulations of the work bid upon, alternative proposals, or any other modification of the bid form which is not specifically called for in the contract documents may result in the DISTRICT's rejection of the bid as not being responsive to the Notice Inviting Bids. **No oral or telephonic modification of any bid submitted will be considered**.

5. Erasures, Inconsistent or Illegible Bids. The bid submitted must not contain any erasures, interlineations, or other corrections unless each such correction creates no inconsistency and is suitably authenticated by affixing in the margin immediately opposite the correction the signature or signatures of the person or persons signing the bid. In the event of inconsistency between words and figures in the bid price, words shall control figures. In the event that the DISTRICT determines that any bid is unintelligible, inconsistent, or ambiguous, the DISTRICT may reject such bid as not being responsive to the Notice Inviting Bids.

6. Examination of Site and Contract Documents. Each bidder shall visit the site of the proposed work and become fully acquainted with the conditions relating to the construction and labor so that the facilities, difficulties, and restrictions attending the execution of the work under the contract are fully understood. Bidders shall thoroughly examine and be familiar with the drawings and specifications. The failure or omission of any bidder to receive or examine any contract documents, form, instrument, addendum, or other document or to visit the site and become acquainted with conditions there existing shall not relieve any bidder from obligations with respect to the bid or to the contract. The submission of a bid shall be taken as prima facie evidence of compliance with this section. Bidders shall not, at any time after submission of the bid, dispute, complain, or assert that there were any misunderstandings with regard to the nature or amount of work to be done.

7. Withdrawal of Bids. Any bid may be withdrawn, either personally or by written request, at any time prior to the scheduled closing time for receipt of bids. The bid security for bids withdrawn prior to the scheduled closing time for receipt of bids, in accordance with this paragraph, shall be returned upon demand thereof.

No bidder may withdraw any bid for a period of ninety (90) calendar days after the date set for the opening of bids. All withdrawals must be in writing.

8. Agreements, Insurance, and Bonds. The Agreement form which the successful bidder, as CONTRACTOR, will be required to execute, and the form of the bonds and insurance endorsements which such CONTRACTOR will be required to furnish, are included in the contract documents and should be carefully examined by the bidder. Payment bond and performance bonds in the amount of one hundred percent (100%) of the amount of the contract and insurance endorsements must be furnished as required in the contract, all prior to execution of the contract.

9. Interpretation of Plans and Documents. If any prospective bidder is in doubt as to the true meaning of any part of the contract documents, or finds discrepancies in, or omissions from the drawings and specifications, a written request for an interpretation or correction thereof may be submitted to the Architect. The bidder submitting the request shall be responsible for its prompt delivery. **Any interpretation or correction of the contract documents will only be made by addendum duly issued, and a copy of such addendum will be mailed or delivered to each contractor receiving a set of the contract documents.** No person is authorized to make any oral interpretation of any provision in the contract documents, nor shall any oral interpretation be binding on the DISTRICT. If discrepancies on drawings, or in specifications, or conflicts between drawings and specifications are not covered by addenda, bidder shall include in the bid methods of construction and materials resulting in the higher bid.

10. Bidders Interested in More Than One Bid. No person, firm, or corporation shall be allowed to make, or file, or be interested in more than one prime bid for the same work unless alternate bids are specifically called for. A person, firm, or corporation that has submitted a proposal to a bidder, or that has quoted prices of materials to a bidder, is not thereby disqualified from submitting a proposal or quoting prices to other bidders or making a prime proposal.

11. Award of Contract. The DISTRICT reserves the right to reject any or all bids, or to waive any irregularities or informalities in any bids or in the bidding. The award of the contract, if made by the DISTRICT, will be by action of the governing board and to the lowest responsible and responsive bidder thereof from among those bidders responsive to the call for bids. In the event an award is made to bidder, and such bidder fails or refuses to execute the contract and provide the required documents within ten (10) calendar days after notification of the award of the contract to bidder, the DISTRICT may award the contract to the next lowest responsible and responsive bidder or release all bidders**. Each bid must conform and be responsive to the contract documents as defined in the General Conditions**.

12. Alternates. If alternate bids are called for, the contract may be awarded at the election of the governing board to the lowest responsible and responsive bidder using the method and procedures outlined in the Notice Inviting Bids.

13. Evidence of Responsibility. Upon the request of the DISTRICT, a bidder whose bid is under consideration for the award of the contract shall submit promptly to the DISTRICT satisfactory evidence showing the bidder's financial resources, surety and insurance claims experience, construction experience, completion ability, workload, organization available for the performance of the contract, and other factors pertinent to a project of the scope involved.

14. Listing Subcontractors. Each bidder shall submit with the bid, on the Designation of Subcontractors form furnished with the contract documents, the portion of work, a list of the names, license numbers, subcontract amount, and locations of the places of business of each subcontractor who will perform work or labor or render service to the bidder in or about the project, or a subcontractor who under subcontract to the bidder, specially fabricates and installs a portion of the work, in an amount in excess of one-half of 1 percent of the bidder's total bid as required by the Subletting and Subcontracting Fair Practices Act (Public Contract Code Section 4100, et. seq.). If alternate bids are called for and the bidder intends to use different or additional subcontractors, a separate list of subcontractors must be submitted for each such alternate.

15. Workers' Compensation. In accordance with the provisions of Labor Code Section 3700, the successful bidder as the CONTRACTOR shall secure payment of compensation to all employees. The CONTRACTOR shall sign and file with the DISTRICT the following certificate prior to performing the work under this contract: "I am aware of the provisions of Section 3700 of the Labor Code, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this contract." The form of such certificate is included as a part of the contract documents.

16. Contractor's License. To perform the work required by this notice, the CONTRACTOR must possess a **Class C10 Contractor's License**, and the CONTRACTOR must maintain the license throughout the duration of the contract. If, at the time of award of the contract, bidder is not licensed to perform the project in accordance with Division 3, Chapter 9, of the Business and Professions Code for the State of California and the Notice to Contractors calling for bids, such bid will not be considered and the CONTRACTOR will forfeit its bid security to the DISTRICT.

17. Anti-Discrimination. It is the policy of the DISTRICT that in connection with all work performed under contracts, there be no discrimination against any prospective or active employee engaged in the work because of race, religion, medical condition, disability, marital status, sex, age or sexual orientation. The CONTRACTOR agrees to comply with applicable federal and California laws, including, but not limited to, the California Fair Employment and

Housing Act, beginning with Government Code section 12900 and Labor Code section 1735. In addition, the CONTRACTOR agrees to require like compliance by any subcontractors employed on the work by such CONTRACTOR.

18. Hold Harmless. CONTRACTOR shall defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, CONTRACTOR shall protect and defend, at its own expense, DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorneys fees or other proceeding based upon such act, omission, breach or as otherwise required by this Section.

Furthermore, CONTRACTOR agrees to and does hereby defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorneys fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the DISTRICT.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of CONTRACTOR or any person, firm or corporation employed by CONTRACTOR, either directly or by independent contract, including all damages or injury to, loss (including theft), or loss of use of, any property, sustained by any person, firm or corporation, including the DISTRICT, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off DISTRICT property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the DISTRICT.

(c) Any dispute between CONTRACTOR and CONTRACTOR's subcontractors/supplies/sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person

employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

CONTRACTOR, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the DISTRICT, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified in this Section 18 and shall pay or satisfy any judgment that may be rendered against the DISTRICT, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

19. Preference for Materials and Substitutions.

(a) One Product Specified. Unless the plans and specifications state that no substitution is permitted, whenever the contract documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, construction, or any specific name, make, trade name, or catalog number, with or without the words, "or equal," such specification shall be read as if the language "or equal" is incorporated.

(b) Request for Substitution. Bidder may, unless otherwise stated, offer any material, process, article, etc., which is materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the contract document. If bidder desires to offer a substitution for a Specified Item, such bidder must make a request in writing on the District's Substitution Request form ("Request Form") and submit the completed Request Form with the bidder's bid. The Request Form must be accompanied by evidence as to whether the proposed substitution:

1. Is equal in quality, service, and ability to the Specified Item;
2. Will entail no changes in detail, construction and scheduling of related work;
3. Will be acceptable in consideration of the required design and artistic effect;
4. Will provide no cost disadvantage to the DISTRICT;
5. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts;
6. Will require no change in the construction schedule; and
7. Product is available to be ordered and delivered per construction schedule.

In completing the Request Form, bidder must state with respect to each requested substitution whether bidder will agree to provide the Specified Item in the event that the DISTRICT denies bidder's request for substitution of a Specified Item. In the event that

bidder does not agree in the Request Form to provide the Specified Item and the DISTRICT denies the requested substitution, the bidder's bid shall be considered non-responsive and the DISTRICT may award the contract to the next lowest bidder or in its sole discretion, release all bidders. In the event that bidder has agreed in the Request Form to provide the Specified Item and the DISTRICT denies bidder's requested substitution for a Specified Item, bidder shall execute the Agreement and provide the Specified Item without any additional cost or charge to the DISTRICT, and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bid bond will be forfeited.

After the bids are opened, the apparent lowest bidder shall provide, within ten (10) calendar days of opening such bids, any and all drawings, specification, samples, performance data, calculations, and other information as may be required to assist the Architect and the DISTRICT in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the DISTRICT's receipt of such evidence by bidder, the DISTRICT will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The DISTRICT shall have sole discretion in deciding as to whether a proposed request for substitution is equal to or better than a Specified Item. Any request for substitution which is granted by the DISTRICT shall be documented and processed through a Change Order'. The DISTRICT may condition its approval of any substitution upon delivery to the DISTRICT of an extended warranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to DSA, or any other governmental agency having jurisdiction shall be on the bidder.

20. Disqualification of Bidders and Proposals. More than one proposal for the same work from any individual, firm, partnership, corporation, or association under the same or different names will not be accepted; and reasonable grounds for believing that any bidder is interested in more than one proposal for the work will be cause for rejecting all proposals in which such bidder is interested and the bidder will forfeit their bid security to the DISTRICT.

21. Unbalanced or Altered Bids. Proposals in which the prices are obviously unbalanced, and those which are incomplete or show any alteration of form, or contain any additions or conditional or alternate bids that are not called for or otherwise permitted, may be rejected. A proposal on which the signature of the bidder has been omitted may be rejected.

22. Employment of Apprentices. The CONTRACTOR and all Subcontractors shall comply with the DISTRICT's Labor Compliance Program and provisions of California Labor Code including, but not limited to sections 1777.5, 1777.6, and 1777.7 concerning the employment of apprentices. The CONTRACTOR and any Subcontractor under him shall comply with the requirements of said sections, including applicable portions of all subsequent amendments in the employment of apprentices; however, the CONTRACTOR shall have full responsibility for

compliance with said Labor Code sections, for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.

23. Non-Collusion Affidavit. Public Contract Code Section 7106 requires bidders to submit an affidavit of non-collusion with their bids. This form is included with the bid package and must be signed and dated by the bidder under penalty of perjury.

24. Wage Rates, Travel and Subsistence.

(a) Pursuant to Labor Code Sections 1770 et. seq., the DISTRICT has obtained from the Director of the Department of Industrial Relations the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this work is to be performed for each craft, classification or type of worker needed to execute the contract. Copies are available from the DISTRICT to any interested party on request and are also available from the Director of the Department of Industrial Relations. The CONTRACTOR shall obtain copies of the above-referenced prevailing wage sheets and post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

(b) Any worker employed to perform work on the Project and such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

(c) Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified basic rate of per diem wages, plus employer payments, unless otherwise specified in the contract documents or authorized by law.

(d) These per diem rates, including holiday and overtime work, and employer payments for health and welfare, pension, vacation, and similar purposes, are on file at the administrative office of the DISTRICT, located as noted above and are also available from the Director of the Department of Industrial Relations. It is the CONTRACTOR's responsibility to ensure the appropriate prevailing rates of per diem wages are paid for each classification. It shall be mandatory upon the CONTRACTOR to whom the contract is awarded, and upon any subcontractor under such CONTRACTOR, to pay not less than the said specified rates to all workers employed by them in the execution of the contract.

25. No Telephone or Facsimile Availability. Contractor is to provide their own telephone and/or facsimile devices. No telephone or facsimile machine will be available to bidders on the DISTRICT premises at any time.

26. Debarment. If this contract is over $100,000 and funded by a federal or state grant or cooperative agreement, Contractor declares that it is not currently debarred, suspended or otherwise prevented from entering into such contracts, nor are there any proceedings taking place to debar, suspend or otherwise prevent Contractor from entering into such contracts.

27. Filing of Bid Protests. Bidders may file a "protest" of a Contract award with the District's Purchasing Manager. In order for a Bidder's protest to be considered valid, the protest must:

A. Be filed timely and in writing as detailed in this Paragraph;

B. Clearly identify, in detail, the specific District, Staff/Board recommendation and/or action being protested;

C. Clearly identify, in detail, the specific grounds of the protest and the facts supporting the particular protest;

D. Include all relevant and supporting documentation, if applicable, with the protest at the time of filing.

If the bid protest does not comply with each and every one of the requirements set forth above, it may be rejected as invalid. A protest regarding the recommended award of a Contract solicited by the Notice Inviting Bids must be filed in writing with the District within five (5) business days after the bid opening. If the protest is valid, the District's Purchasing Manager, or designee, shall review and evaluate the basis of the protest along with all relevant information and documents. The District's Purchasing Manager, or designee, shall provide the Bidder submitting the bid protest with a written statement concurring with or denying the bid protest. The District's Vice Chancellor of Business and Financial Services will render a final determination and disposition of a bid protest by taking action to adopt, modify or reject the disposition of a bid protest as reflected in the written statement of the Purchasing Manager, or designee. Action by the Vice Chancellor of Business and Financial Services relative to a bid protest shall be final and not subject to appear or reconsideration by the District, any employee or officer of the District or the District's Board of Trustees. The rendition of a written statement by the Purchasing Manager (or designee) and action by the Vice Chancellor of Business and Financial Services to adopt modify or reject the disposition of the bid protest reflected in such written statement shall be express conditions precedent to the institution of any legal or equitable proceedings relative to the bidding process, the District's intent to award the contract, the District's disposition of any bid protest or the District's decision to reject all bid proposals. In the event that any such legal or equitable proceedings are instituted and the District is named as a party thereto, the prevailing party(ies) shall recover from the other

party(ies), as costs, all attorneys' fees and costs incurred in connection with any such proceeding, including any appeal arising therefrom.

*** BID FORM**

TO: Riverside Community College District, acting by and through its Governing Board, herein called "DISTRICT".

1. Pursuant to and in compliance with your Notice Inviting Bids and other documents relating thereto, the undersigned bidder, having familiarized himself with the terms of the contract, the local conditions affecting the performance of the contract and the cost of the work at the place where the work is to be done, hereby proposes and agrees to perform within the time stipulated, the contract, including all of its component parts, and everything required to be performed, including its acceptance by the DISTRICT, and to provide and furnish any and all labor, materials, tools, expendable equipment, and utility and transportation services necessary to perform the contract and complete all of the work in a workmanlike manner required in connection with the construction of the **STEM Center Modulars II Phase B Interior IT/Data Installation project at Norco College** in the DISTRICT described above, all in strict conformance with the drawings and other contract documents on file at the Purchasing Office of said DISTRICT for amounts set forth herein.

2. ADDENDA: The undersigned has thoroughly examined any and all Addenda (if any) issued during the bid period and is thoroughly familiar with all contents thereof and acknowledges receipt of the following Addenda: (Bidder to list all addenda).

ADDENDUM NO. _____	DATE RECEIVED _____
ADDENDUM NO. _____	DATE RECEIVED _____
ADDENDUM NO. _____	DATE RECEIVED _____
ADDENDUM NO. _____	DATE RECEIVED _____

3. BASE BID

TOTAL CASH PURCHASE PRICE IN WORDS & NUMBERS:

_____ DOLLARS

($ _____)

4. ALTERNATE BIDS: The following amounts shall be added to or deducted from the Base Bid at the DISTRICT's option. Alternates are fully described in the Specifications.

Alternate No. 1: ADD/DEDUCT _____ Dollars ($_____)
Alternate No. 2: ADD/DEDUCT _____ Dollars ($_____)
Alternate No. 3: ADD/DEDUCT _____ Dollars ($_____)

5. TIME FOR COMPLETION: The DISTRICT may give a notice to proceed within ninety (90) days of the award of the bid by the DISTRICT. Once the CONTRACTOR has received the notice to proceed, the CONTRACTOR shall complete the work in the time specified in the Agreement.

   In the event that the DISTRICT desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the CONTRACTOR, giving the notice to proceed may be postponed by the DISTRICT. It is further expressly understood by the CONTRACTOR, that the CONTRACTOR shall not be entitled to any claim of additional compensation as a result of the postponement of giving the notice to proceed.

   If the CONTRACTOR believes that a postponement will cause a hardship to it, the CONTRACTOR may terminate the contract with written notice to the DISTRICT within ten (10) days after receipt by the CONTRACTOR of the DISTRICT's notice of postponement. It is further understood by the CONTRACTOR that in the event that the CONTRACTOR terminates the Contract as a result of postponement by the DISTRICT, the DISTRICT shall only be obligated to pay the CONTRACTOR for work performed by the CONTRACTOR at the time of notification of postponement. Should the CONTRACTOR terminate the contract as a result of a notice of postponement, the DISTRICT shall have the authority to award the contract to the next lowest responsible bidder.

6. It is understood that the DISTRICT reserves the right to reject any or all bids and/or waive any irregularities or informalities in this bid or in the bid process. The CONTRACTOR understands that it may not withdraw this bid for a period of ninety (90) days after the date set for the opening of bids. All withdrawals must be in writing.

7. Attached is bid security in the amount of not less than ten percent (10%) of the bid:

   $ _____. Bid bond, certified check, cashier's check, or cash. (circle one)

8. The required List of designated subcontractors is attached hereto.

9. The required Noncollusion Declaration is attached hereto.

10. The Substitution Request Form, if applicable, is attached hereto.

11. It is understood and agreed that if written notice of the acceptance of this bid is mailed, telegraphed, or delivered to the undersigned after the opening of the bid, and within the time this bid is required to remain open, or at any time thereafter before this bid is withdrawn, the undersigned will execute and deliver to the DISTRICT a contract in the form attached hereto in accordance with the bid as accepted, and that he will also furnish and deliver to the DISTRICT the Performance Bond and Payment Bond, all within ten (10) calendar days after receipt of notification of award, and that the work under the contract shall be commenced by the undersigned bidder, if awarded the contract, by the start date provided in the DISTRICT's Notice to Proceed, and shall be completed by the CONTRACTOR in the time specified in the contract documents.

12. Notice of Intent to Award Contract or other correspondence should be addressed to the undersigned at the address stated below.

13. The names of all persons interested in the foregoing proposal as principals are as follows:

(IMPORTANT NOTICE: If bidder or other interested person is a corporation, state the legal name of such corporation, as well as the names of the president, secretary, treasurer, and manager thereof; if a co-partnership, state the true names of the firm, as well as the names of all individual co-partners comprising the firm; if bidder or other interested person is an individual, state the first and last names in full.)

14. The undersigned bidder shall be licensed and shall provide the following information:

Bidder's California Contractor's
License Number: _____
License expiration date: _____
Name on License: _____
Type of License: _____
DUNS #: _____

If the bidder is a joint venture, each member of the joint venture must include the above information.

15. Time is of the essence regarding this contract, therefore, in the event the bidder to whom the Notice of Intent to Award Contract is given fails or refuses to post the required bonds and return executed copies of the Agreement form within ten (10) calendar days from the date of receiving the Notice of Intent to Award Contract, the DISTRICT may declare the bidder's bid deposit or bond forfeited as damages.

16. Pursuant to Government Code Section 4552, in submitting a bid to the DISTRICT, the bidder offers and agrees that if the bid is accepted, it will assign to the DISTRICT all rights, title, and interest in, and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. § 15) or under the Cartwright Act (Business and Professions Code Sections 16700, et. seq.,), arising from the purchase of goods, materials, or services by the bidder for sale to the DISTRICT pursuant to the bid. Such assignment shall be made and become effective at the time the DISTRICT tenders final payment to the bidder.

17. The bidder declares that he/she has carefully examined the location of the proposed work, that he/she has examined the Plans, General Conditions of the contract, Special Conditions of the contract, and Specifications, and read the accompanying instructions to bidders, and hereby proposes and agrees, if this proposal is accepted, to furnish all materials and do all work required to complete the said work in accordance with the Plans, General Conditions of the contract, Special Conditions of the contract, and Specifications, in the time and manner therein prescribed for the unit cost and lump sum amounts set forth in this Bid Form.

18. The bidder is familiar with Government Code Sections 12650, et. seq., and Penal Code Section 72 and understands that false claims can lead to imprisonment.

I, the below-indicated bidder, declare under penalty of perjury that the information provided and representations made in this bid are true and correct.

_____

Proper Name of Bidder

_____

Address

Phone: _____ Fax: _____

E-mail: _____ Website: _____

By: _____ Date:_____

Signature of Bidder

NOTE: *If bidder is a corporation, the legal name of the corporation shall be set forth above together with the signature of authorized officers or agents and the document shall bear the corporate seal; if bidder is a partnership, the true name of the firm shall be set forth above, together with the signature of the partner or partners authorized to sign contracts on behalf of the partnership; and if bidder is an individual, his signature shall be placed above.*

All signatures must be made in permanent blue ink.

* BID BOND

KNOW ALL MEN BY THESE PRESENTS that we, the undersigned, (hereafter called "Principal"), and _____ _____ (hereafter called "Surety"), are hereby held and firmly bound unto Riverside Community College District (hereafter called "Owner") in the sum of _____ ($_____) for the payment of which, well and truly to be made, we hereby jointly and severally bind ourselves, successors, and assigns.

SIGNED this _____ day of _____, 20___.

The condition of the above obligation is such that whereas the Principal has submitted to the Owner a certain Bid, attached hereto and hereby made a part hereof, to enter into a contract in writing for the construction of _____.

NOW, THEREFORE,

a. If said Bid is rejected, or

b. If said Bid is accepted and the Principal executes and delivers a contract or the attached Agreement form within ten (10) calendar days after acceptance (properly completed in accordance with said Bid), and furnishes bonds for his faithful performance of said Contract and for payment of all persons performing labor or furnishing materials in connection therewith,

Then this obligation shall be void; otherwise, the same shall remain in force and effect.

Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the contract, or the call for bids, or the work to be performed thereunder, or the specifications accompanying the same, shall in anyway affect its obligation under this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of said contract, or the call for bids, or the work, or to the specifications.

In the event suit is brought upon this bond by the DISTRICT and judgment is recovered, the Surety shall pay all costs incurred by the DISTRICT in such suit, including without limitation, attorneys' fees to be fixed by the court.

IN WITNESS WHEREOF, Principal and Surety have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, on the day and year first set forth above.

PRINCIPAL: _____

_____

ATTEST: (if individual, two witnesses are required)

By:_____ By:_____

Title:_____ Title:_____

ATTEST: (if corporation)

By:_____

Title:_____

(Corporate Seal)

SURETY: _____

_____

ATTEST: (if individual, two witnesses are required)

By:_____ By:_____

Title:_____ Title:_____

ATTEST: (if corporation)

By:_____

Title:_____

(Corporate Seal)

IMPORTANT:

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant, or loan funds, it must also appear on the Treasury Department's most current list (Circular 570 as amended).

THIS IS A REQUIRED FORM.

Any claims under this bond may be addressed to:

(Name and Address of Surety)

_____

_____

_____

(Name and Address of agent or representative for service of process in California if different from above)

_____

_____

_____

(Telephone Number of Surety and agent or representative for service of process in California).

_____

_____

_____

* BID GUARANTEE FORM

Accompanying this proposal is cash, a cashier's check or a certified check payable to the order of the Riverside Community College District in an amount equal to ten percent (10%) of the base bid and alternates ($_____).

This cash or the proceeds of this check shall become the property of said DISTRICT, if, this proposal shall be accepted by the DISTRICT through the DISTRICT's GOVERNING BOARD, and the undersigned fails to execute a contract with and furnish the sureties required by the DISTRICT within the required time; otherwise, said cash or check is to be returned to the undersigned.

_____

Bidder

DESIGNATION OF SUBCONTRACTORS

In compliance with the Subletting and Subcontracting Fair Practices Act (California Public Contract Code Chapter 4, Sections 4100 et. seq.,) and any amendments thereof, each bidder shall submit prior to the Bid Closing Deadline as set forth below: (a) the name, license number, and location of the place of business of each subcontractor who will perform work or labor or render service to the prime contractor, who will perform work or labor or work or improvement to be performed under this contract, or a subcontractor licensed by the State of California who, under subcontract to the prime contractor, specially fabricates and installs a portion of the work or improvements according to detailed drawings contained in the plans and specifications in an amount in excess of one-half of one percent of the prime contractor's total bid; (b) the portion and description of the work which will be done; and the subcontract amount for each subcontractor under this Act. The prime contractor shall list only one subcontractor for each such portion as is defined by the prime contractor in this bid. All subcontractors shall be properly licensed by the California State Licensing Board at the time bids are opened by the District. If additional sheets are needed to provide the information that is required to be provided as part of the Designation of Subcontractors, they shall be included by Bidder as part of its Bid. If bidding of Alternates is called for by the Bidding Documents and the Bidder intends to use different or additional Subcontractors, a separate Designation of Subcontractors form must be submitted for each such Alternate. If the Designation of Subcontractors includes instructions or blanks indicating that additional information concerning a listed Subcontractor (such as, but not limited to, a Subcontractor's bid price) is requested or required, such information only may be submitted to the District, at the same location designated for submission of Bids and using the Designation of Subcontractors form specified in the Bidding Documents, within twenty-four (24) hours after the Bid Closing Deadline.

If a prime contractor fails to specify a subcontractor, or if a prime contractor specifies more than one subcontractor for the same portion of work to be performed under the contract in excess of one-half of one percent of the prime contractor's total bid, the CONTRACTOR shall be deemed to have agreed that the CONTRACTOR is fully qualified to perform that portion, and that the CONTRACTOR alone shall perform that portion.

No prime contractor whose bid is accepted shall (a) substitute any subcontractor, (b) permit any subcontractor to be voluntarily assigned or transferred or allow the relevant portion of the work to be performed by anyone other than the original subcontractor listed in the original bid, or (c) sublet or subcontract any portion of the work in excess of one-half of one percent of the prime contractor's total bid where the original bid did not designate a subcontractor, except as authorized in the Subletting and Subcontracting Fair Practices Act.

Subletting or subcontracting of any portion of the work in excess of one-half of one percent of the prime contractor's total bid where no subcontractor was designated in the original bid shall only be permitted in cases of public emergency or necessity, and then only after a finding, reduced to writing as a public record, of the authority awarding this contract setting forth the facts constituting the emergency or necessity.

NOTE: If alternate bids are called for and bidder intends to use different or additional subcontractors on the alternates, a separate list of subcontractors must be provided for each such alternate.

*** DESIGNATION OF SUBCONTRACTORS FORM**

(Attach additional sheets, if needed)

Description & Portion of Work	Name of Subcontractor and License Number	Location & Place of Business	Subcontract Amount

DATED: _____

_____
Proper Name of Bidder

By: _____

_____

_____
(Signature of Bidder

Address: _____

_____

_____

Phone: _____

* NONCOLLUSION DECLARATION

The undersigned declares:

I am the _____ of _____, the party making the foregoing bid.

The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____[date], at _____[city], _____[state].

_____
Signature

_____
Print Name

* CONTRACTOR'S CERTIFICATE REGARDING WORKERS' COMPENSATION

Labor Code Section 3700 in relevant part provides:

Every employer except the State shall secure the payment of compensation in one or more of the following ways:

1. By being insured against liability to pay compensation by one or more insurers duly authorized to write compensation insurance in this State.

2. By securing from the Director of Industrial Relations a certificate of consent to self-insure, which may be given upon furnishing proof satisfactory to the Director of Industrial Relations, of ability to self-insure and to pay any compensation that may become due to employees.

I am aware of the provisions of Labor Code Section 3700 which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provision before commencing the performance of the work of this contract.

_____

Proper Name of Bidder

By: _____

_____

In accordance with Article 5 (commencing at section 1860), Chapter 1, Part 7, Division 2 of the Labor Code, the above certificate must be signed and submitted with the Contractor's bid.

* ACKNOWLEDGMENT OF BIDDING PRACTICES REGARDING INDEMNITY

TO: Riverside Community College District, Riverside, CA 92506

RE: Project Number **BID NO. 2013/14-48-UCCAP**

Construction Contract for **Norco College STEM Center Modulars II - Phase B - Interior Renovations**

Please be advised that with respect to the above-referenced PROJECT the undersigned CONTRACTOR on behalf of itself and all subcontractors hereby waives the benefits and protection of Labor Code Section 3864, which provides:

> "If an action as provided in this chapter is prosecuted by the employee, the employer, or both jointly against the third person results in judgment against such third person, the employer shall have no liability to reimburse or hold such third person harmless on such judgment or settlement in the absence of a written agreement to do so executed prior to the injury."

This Agreement has been signed by an authorized representative of the contracting party and shall be binding upon its successors and assignees. The undersigned further agrees to promptly notify the DISTRICT of any changes of ownership of the contracting party or any subcontractor while this Agreement is in force.

_____
Signature

_____
Proper Name of Bidder

*** SUBSTITUTION REQUEST FORM**

Project: **Norco College STEM Center Modulars II - Phase B - Interior Renovations**

Riverside Community College District

Pursuant to Public Contract Code Section 3400, bidder hereby requests substitution of the following articles, devices, equipment, products, materials, fixtures, patented processes, forms, methods, or types of construction:

Specified Item	Requested Substituted Item	Agree to Provide Specific Item In the Event Request is Denied[1] (circle one)	District Decision (circle one)
1.		Yes No	Grant Deny
2.		Yes No	Grant Deny
3.		Yes No	Grant Deny
4.		Yes No	Grant Deny
5.		Yes No	Grant Deny
6.		Yes No	Grant Deny
7.		Yes No	Grant Deny
8.		Yes No	Grant Deny
9.		Yes No	Grant Deny

[1] Bidder must state whether bidder will provide the Specified Item in the event that District denies the request for substitution. If bidder states that bidder will not provide the Specified Item in the event their request for substitution is denied, bidder's bid will be considered non responsive. However, if bidder states that bidder will provide the Specified Item in the event that bidder's request for substitution is denied, bidder shall execute the Agreement and provide such Specified Item(s) and if bidder fails to execute the Agreement with the Specified Item(s), bidder's bond will be forfeited.

This Request Form must be accompanied by evidence as to whether the proposed substitution (1) is equal in quality, service, and ability to the Specified Item; (2) will entail no change in detail, construction, and scheduling of related work; (3) will be acceptable in consideration of the required design and artistic effect; (4) will provide no cost disadvantage to the DISTRICT; (5) will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and (6) will require no change of the construction schedule.

The undersigned states that the following paragraph, unless modified on attachments, are correct:

1. The proposed substitution does not affect the dimensions shown on the Drawings.

2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitution.

3. The proposed substitution will have no adverse effect on other trades, the construction schedule, or specified warranty requirements.

4. Maintenance and service parts will be available locally for the proposed substitution.

Name of Bidder: _____

By: _____

Riverside Community College District:

By: _____

SITE VISIT CERTIFICATION

I certify that I have visited the site of the proposed work and have fully acquainted myself with the conditions of the **Norco College STEM Center Modulars II - Phase B - Interior Renovations**, as well as those relating to construction and labor of the Project, and I fully understand the facilities, difficulties, and restrictions which may impact the total and adequate completion of the Project.

I certify under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

I agree to fully defend, indemnify, and hold harmless the DISTRICT, Architect, Inspectors, and their directors, officers, employees, agents, and volunteers from any damages, costs, expenses, or omissions related to conditions that could or should have been identified during my visit to the site.

Signature of Bidder _____

Typed Name of Bidder _____

SUBSCRIBED BEFORE ME ON THIS _____ DAY OF _____ 20_

Notary Public _____

My Commission Expires: _____

SAMPLE BID MAILING LABEL

If sending your bid through USPS mail or overnight through FedEx, UPS, or other courier, please use the following mailing label sample:

Riverside Community College District
Purchasing Department
450 E. Alessandro Blvd.
Riverside, CA 92508

RE: STEM Center Modulars II Phase B Interior IT/Data Installation
at Norco College
BID NO 2014/15-04-UCCAP

AGREEMENT FORM

THIS AGREEMENT, entered into this**_____day of _____, 2014** in the County of Riverside of the State of California, by and between the Riverside Community College District, hereinafter called the "DISTRICT", and _____ hereinafter called the "CONTRACTOR".

WITNESSETH that the DISTRICT and the CONTRACTOR for the consideration stated herein agree as follows:

ARTICLE I - SCOPE OF WORK: The CONTRACTOR shall furnish all labor, materials, equipment, tools, and utility and transportation services, and perform and complete all work required in connection with **STEM Center Modulars II Phase B Interior IT/Data Installation at Norco College, Bid No 2014/15-04-UCCAP** in strict accordance with the contract documents enumerated in Article 7 below. The CONTRACTOR shall be liable to the DISTRICT for any damages arising as a result of a failure to comply with that obligation, and the CONTRACTOR shall not be excused with respect to any failure to so comply by an act or omission of the Architect, Engineer, Inspector, Division of the State Architect (DSA), or representative of any of them, unless such act or omission actually prevents the CONTRACTOR from fully complying with the contract documents and the CONTRACTOR protests, in accordance with the contract documents, that the act or omission is preventing the CONTRACTOR from fully complying with the contract documents. Such protest shall not be effective unless reduced to writing and filed with the DISTRICT office within seven (7) days of the date of occurrence of such act or omission preventing the CONTRACTOR from fully complying with the Contract Documents.

ARTICLE 2 - TIME OF COMPLETION: The DISTRICT may give notice to proceed within ninety (90) days of the award of the bid by the DISTRICT. No work may commence until all required conditions have been met in full and a Notice to Proceed letter has been issued by the District. Once the CONTRACTOR has received a notice to proceed, the CONTRACTOR shall complete the work within **thirty-two (32)** calendar days from receipt of the notice to proceed. It is expressly understood that time is of the essence.

In the event that the DISTRICT desires to postpone giving the notice to proceed beyond this ninety (90) day period, it is expressly understood that with reasonable notice to the CONTRACTOR, giving the notice to proceed may be postponed by the DISTRICT. It is further expressly understood by the CONTRACTOR, that the CONTRACTOR shall not be entitled to any claim of additional compensation as a result of the DISTRICT's postponement of giving the notice to proceed.

If the CONTRACTOR believes that a postponement will cause hardship to it, the CONTRACTOR may terminate the contract with written notice to the DISTRICT within ten (10) days after receipt by the CONTRACTOR of the DISTRICT's notice of postponement. It is further understood by the CONTRACTOR that in the event that the CONTRACTOR terminates the contract as a result of postponement by the DISTRICT, the DISTRICT shall only be obligated to pay the

CONTRACTOR for the work performed by the CONTRACTOR at the time of notification of postponement. Should the CONTRACTOR terminate the contract as a result of a notice of postponement, the DISTRICT shall have the authority to award the contract to the next lowest responsible bidder.

ARTICLE 3 - LIQUIDATED DAMAGES: It being impracticable and infeasible to determine the amount of actual damage, it is agreed that the CONTRACTOR will pay the DISTRICT the sum of **one hundred dollars and zero cents ($100.00)** per calendar day for each and every day of delay beyond the time set forth in Article 2 of this Agreement for completing said work as liquidated damages and not as a penalty or forfeiture. In the event the same is not paid, the CONTRACTOR further agrees that the DISTRICT may deduct such amount thereof from any money due or that may become due the CONTRACTOR under the contract. This Article shall not be construed as preventing the DISTRICT from the recovery of damages under provisions of the contract documents.

ARTICLE 4 - CONTRACT PRICE: The DISTRICT shall pay to the CONTRACTOR as full consideration for the faithful performance of the contract, subject to any additions or deductions as provided in the contract documents, the sum of **_____Dollars ($_____)**, said sum being the total amount stipulated in the proposal. Payment shall be made as set forth in the General Conditions.

Should any Change Order result in an increase in the contract price, the cost of such Change Order shall be agreed to in advance by the CONTRACTOR and the DISTRICT, subject to the monetary limitations set forth in Public Contract Code Section 20118.4. In the event that the CONTRACTOR proceeds with a change in work without an agreement between the DISTRICT and CONTRACTOR regarding the cost of a Change Order, the CONTRACTOR waives any claim of additional compensation for such additional work.

ARTICLE 5 - HOLD HARMLESS AGREEMENT: CONTRACTOR shall defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, CONTRACTOR shall protect and defend, at its own expense, DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorneys fees or other proceeding based upon such act, omission, breach or as otherwise required by this Article.

Furthermore, CONTRACTOR agrees to and does hereby defend, indemnify and hold harmless DISTRICT, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorneys fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the DISTRICT.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of CONTRACTOR or any person, firm or corporation employed by CONTRACTOR, either directly or by independent contract, including all damages or injury to or death of persons, loss (including theft) or loss of use of any property, sustained by any person, firm or corporation, including the DISTRICT, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off DISTRICT property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the DISTRICT.

(c) Any dispute between CONTRACTOR and CONTRACTOR's subcontractors/supplies/sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

CONTRACTOR, at its own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the DISTRICT, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Article 5 and shall pay or satisfy any judgment that may be rendered against the DISTRICT, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

ARTICLE 6 - PROVISIONS REQUIRED BY LAW: Each and every provision of law and clause required to be inserted in this contract shall be deemed to be inserted herein, and this Contract shall be read and enforced as though it were included herein, and if through mistake or otherwise any such provision is not inserted or is not inserted correctly, then upon application of either party the contract shall forthwith be physically amended to make such insertion or correction.

ARTICLE 7 - COMPONENT PARTS OF THE CONTRACT: The Contract entered into by this Agreement consists of the following Contract Documents, all of which are component parts of the Contract as if herein set out in full or attached hereto:

Notice Inviting Bids	Bid Form
Instructions to Bidders	Substitution Request Form
Designation of Subcontractors	Worker's Compensation/Employers Liability Endorsement
Non-Collusion Affidavit	Acknowledgment of Bidding Practices Regarding Indemnity
Bid Guarantee Form	Agreement Form
Bid Bond	Escrow Agreement for Security Deposit In Lieu of Retention

Performance Bond	Contractor's Certificate Regarding Drug-Free Workplace
Payment Bond	Contractor's Certificate Regarding Worker's Compensation
Drawings/Plans	Automobile Liability Endorsement
Guarantee	General Liability Endorsement
General Conditions	Contractor's Certificate Regarding Alcohol and Tobacco
Specifications	
All Addenda as Issued	Supplementary and Special Conditions

All of the above named Contract Documents are intended to be complementary. Work required by one of the above named Contract Documents and not by others shall be done as if required by all.

ARTICLE 8 - PREVAILING WAGES: Wage rates for this Project shall be in accordance with the general prevailing rate of holiday and overtime work in the locality in which the work is to be performed for each craft, classification, or type of work needed to execute the contract as determined by the Director of the Department of Industrial Relations. Copies of schedules of rates so determined by the Director of the Department of Industrial Relations are on file at the Labor Compliance Program's administrative office of the DISTRICT and are also available from the Director of the Department of Industrial Relations.

The following are hereby referenced and made a part of this Agreement and CONTRACTOR stipulates to the provisions contained therein.

1. Chapter 1 of Part 7 of Division 2 of the Labor Code (Section 1720 et seq.)
2. California Code of Regulations, Title 8, Chapter 8, Subchapters 3 & 4 (Section 16000 et seq.)
3. The DISTRICT's Labor Compliance Program

ARTICLE 9 - AUDIT

STATE RECORD AUDIT: In accordance with Government Code Section 8546.7, records of both the DISTRICT and the CONTRACTOR shall be subject to examination and audit by the Auditor General for a period of three (3) years after final payment.

DISTRICT RIGHT OF AUDIT- EXAMINATION OF RECORDS:

Contractor's "records" shall, upon reasonable notice, be open to inspection and subject to audit and/or reproduction during normal business working hours. Such audits may be performed by District's representative, the Construction Manager, or an outside representative engaged by the District. The District, or its designee, may conduct such audits or inspections through the term of this contract and for a period of three (3) years after final payment or longer if required by law. District's representatives may (without limitation) conduct verifications such as counting employees at the construction site, witnessing the distribution of payroll, verifying information and amounts through interviews and written confirmations with contractor's employees, field and agency labor, subcontractors, and vendors.

Contractor's records as referred to in this contract shall include any and all information, materials and data of every kind and character, including without limitation, records, books, papers, documents, subscriptions, recordings, agreement, purchase orders, leases, contracts, commitments, arrangement, notes, daily diaries, superintendent reports, drawings, receipts, vouchers and memoranda, and any and all other agreements, sources of information and matters that may in District's judgment have any bearing on or pertain to any matters, rights, duties or obligations under or covered by any contract document. Such records shall include (hard copy, as well as computer readable data if it can be made available), written policies and procedures; time sheets; payroll registers; payroll records; cancelled payroll checks; subcontract files (including proposals of successful and unsuccessful bidders, bid recaps, negotiation notes, etc.); original bid estimates; estimating work sheets; correspondence; change order files (including documentation covering negotiated settlements); back charge logs and supporting documentation; invoices and related payment documentation; general ledger; information detailing cash and trade discounts earned; insurance rebates and dividends; and any other contractor records which may have a bearing on matters of interest to the District in connection with the contractor's dealings with the District to the extent necessary to adequately permit evaluation and verification of any or all of the following:

(a) Compliance with contract requirements for deliverables
(b) Compliance with approved plans and specifications
(c) Compliance with District's business ethics expectations
(d) Compliance with contract provisions regarding the pricing of change orders
(e) Accuracy of contractor representations regarding the pricing of invoices
(f) Accuracy of contractor representations related to claims submitted by the contractor or any of its payees.

Contractor shall require all payees (examples of payees include subcontractors, material suppliers, insurance carriers, etc.) to comply with the provisions of this article by including the requirements hereof in a written contract agreement between Contractor and payee. Contractor will ensure that all payees (including those entering into lump sum contracts) have the same right to audit provisions contained in this contract.

District's authorized representative or designee shall have reasonable access to the Contractor's facilities, shall be allowed to interview all current or former employees to discuss matters pertinent to the performance of this contract and shall be provided adequate and appropriate work space, in order to conduct audits in compliance with this article.

If an audit inspection or examination in accordance with this section, discloses overpricing or overcharges (of any nature) by the Contractor to the District in excess of one percent (1%) of the total contract billings, in addition to making adjustments for the overcharges, the reasonable actual cost of the District's audit shall be reimbursed to the District by the Contractor. Any adjustments and/or payments which must be made as a result of any such audit or inspection of

the Contractor's invoices and/or records shall be made within a reasonable amount of time (not to exceed 90 days) from presentation of District's findings to Contractor.

ARTICLE 10 - CONTRACTOR'S LICENSE: The CONTRACTOR must possess throughout the Project a Class **C10** Contractor's License, issued by the State of California, which must be current and in good standing.

ARTICLE 11 – DEBARMENT – Contractor declares that if this contract is over $100,000 and funded by a federal or state grant or cooperative agreement, it is not currently debarred, suspended or otherwise prevented from entering into such contracts, nor are there any proceedings currently taking place to debar, suspend or otherwise prevent Contractor from entering into such contracts.

IN WITNESS WHEREOF, this Agreement has been duly executed by the above named parties, on the day and year first above written.

Riverside Community College District	CONTRACTOR:
_____	_____
Signature	Typed or Printed Name
By: Aaron S. Brown Vice Chancellor, Business & Financial Services	_____ Title
	_____ Signature
	_____ Type or Printed Name
	_____ Title (Authorized Officers or Agents)
	_____ Signature

(CORPORATE SEAL)

PAYMENT BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Riverside Community College District (sometimes referred to hereinafter as "Obligee") has awarded to **_____.** (hereinafter designated as the "CONTRACTOR"), an agreement for the work described as follows**: STEM Center Modulars II Phase B Interior IT/Data Installation project at Norco College** hereinafter referred to as the "Public Work"); and

WHEREAS, said CONTRACTOR is required to furnish a bond in connection with said Contract, and pursuant to California Civil Code Section 3247;

NOW, THEREFORE, We, **_____,** the undersigned CONTRACTOR, as Principal; and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto Riverside Community College District and to any and all persons, companies, or corporations entitled by law to file stop notices under California Civil Code Section 3181, or any person, company, or corporation entitled to make a claim on this bond, in the sum of **_____Dollars ($_____)** said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which payment will and truly to be made, we bind ourselves, our heirs, executors and administrators, successors and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH that if said Principal, its heirs, executors, administrators, successors, or assigns, or subcontractor, shall fail to pay any person or persons named in Civil Code Section 3181; or fail to pay for any materials, provisions, or other supplies, used in, upon, for, or about the performance of the work contracted to be done, or for any work or labor thereon of any kind, or for amounts due under the Unemployment Insurance Code, with respect to work or labor thereon of any kind; or shall fail to deduct, withhold, and pay over to the Employment Development Department, any amounts required to be deducted, withheld, and paid over by Unemployment Insurance Code Section 13020 with respect to work and labor thereon of any kind, then said Surety will pay for the same, in an amount not exceeding the amount herein above set forth, and in the event suit is brought upon this bond, also will pay such reasonable attorneys' fees as shall be fixed by the court, awarded and taxed as provided in California Civil Code Sections 3247 et. seq.

This bond shall inure to the benefit of any person named in Civil Code Section 3181 giving such person or his/her assigns a right of action in any suit brought upon this bond.

It is further stipulated and agreed that the Surety of this bond shall not be exonerated or released from the obligation of the bond by any change, extension of time for performance,

addition, alteration or modification in, to, or of any contract, plans, or specifications, or agreement pertaining or relating to any scheme or work of improvement herein above described; or pertaining or relating to the furnishing of labor, materials, or equipment thereof; nor by any change or modification of any terms of payment or extension of time for payment pertaining or relating to any scheme or work of improvement herein above described; nor by any rescission or attempted rescission of the contract, agreement or bond; nor by any conditions precedent or subsequent in the bond attempting to limit the right of recovery of claimants otherwise entitled to recover under any such contract or agreement or under the bond; nor by any fraud practiced by any person other than the claimant seeking to recover on the bond; and that this bond be construed most strongly against the Surety and in favor of all persons for whose benefit such bond is given; and under no circumstances shall the Surety be released from liability to those for whose benefit such bond has been given, by reason of any breach of contract between the DISTRICT and the CONTRACTOR or on the part of any obligee named in such bond; that the sole condition of recovery shall be that the claimant is a person described in California Civil Code Sections 3110 and 3112, and who has not been paid the full amount of his or her claim; and that the Surety does hereby waive notice of any such change, extension of time, addition, alteration or modification herein mentioned.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this_____ day of _____, 20___.

PRINCIPAL/CONTRACTOR:

_____

By: _____

SURETY:

_____

By: _____
Attorney-in-Fact

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)	(Name and Address of agent or representative for service for service of process in California)
_____	_____
_____	_____
Telephone: _____	Telephone: _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On this _____ day of _____, in the year _____, before me, _____, a Notary Public in and for said State, personally appeared _____, known to me to be the person whose name is subscribed within the instrument as the Attorney-in-Fact of the _____ (Surety) and acknowledged to me that he subscribed the name of the _____ (Surety) thereto and his own name as Attorney-in-Fact.

_____ (SEAL)
Notary Public in and for said State

Commission expires: _____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

CONTRACT PERFORMANCE BOND
(CALIFORNIA PUBLIC WORK)

KNOW ALL MEN BY THESE PRESENTS:

THAT WHEREAS, Riverside Community College District (sometimes referred to hereinafter as "Obligee") has awarded to _____ (hereinafter designated as the "CONTRACTOR"), an agreement for the work described as follows: **STEM Center Modulars II Phase B Interior IT/Data Installation at Norco College** (hereinafter referred to as the "Public Work"); and

WHEREAS, the work to be performed by the CONTRACTOR is more particularly set forth in that certain contract for said Public Work dated _____ (hereinafter referred to as the "Contract"), which Contract is incorporated herein by this reference; and

WHEREAS, the CONTRACTOR is required by said Contract to perform the terms thereof and to provide a bond both for the performance and guaranty thereof.

NOW, THEREFORE, we, **_____,** the undersigned CONTRACTOR, as Principal, and _____, a corporation organized and existing under the laws of the State of _____, and duly authorized to transact business under the laws of the State of California, as Surety, are held and firmly bound unto Riverside Community College District in the sum of **_____Dollars ($_____),** said sum being not less than one hundred percent (100%) of the total amount payable by said Obligee under the terms of said Contract, for which amount well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH THAT, if the bounded CONTRACTOR, his or her heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and perform the covenants, conditions, and agreements in said Contract and any alteration thereof made as therein provided, on his or her part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their intent and meaning; and shall faithfully fulfill guarantees of all materials and workmanship; and indemnify, defend and save harmless the Obligee, its officers and agents, as stipulated in said Contract, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

For value received, the Surety hereby stipulates and agrees that no change, extension of time, alteration, or addition to the terms of the Contract, or to the work to be performed thereunder, or the Specifications accompanying the same shall in any way affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration, or addition to the terms of the Contract, or to the work, or to the Specifications.

No final settlement between the Obligee and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

CONTRACTOR and Surety agree that if the Obligee is required to engage the services of an attorney in connection with enforcement of the bond, CONTRACTOR and Surety shall pay Obligee's reasonable attorneys' fees incurred, with or without suit, in addition to the above sum.

In the event suit is brought upon this bond by the DISTRICT and judgment is recovered, the Surety shall pay all costs incurred by the DISTRICT in such suit, including reasonable attorneys' fees to be fixed by the Court.

IN WITNESS WHEREOF, we have hereunto set our hands and seals this _____ day of _____, 20___.

PRINCIPAL/CONTRACTOR:

_____

By: _____

SURETY:

_____

By: _____
Attorney-in-Fact

The rate of premium on this bond is _____ per thousand.

The total amount of premium charged: $_____ (This must be filled in by a corporate surety).

IMPORTANT: THIS IS A REQUIRED FORM.

Surety companies executing bonds must possess a certificate of authority from the California Insurance Commissioner authorizing them to write surety insurance defined in California Insurance Code Section 105, and if the work or project is financed, in whole or in part, with federal, grant or loan funds, Surety's name must also appear on the Treasury Department's most current list (Circular 570 as amended).

Any claims under this bond may be addressed to:

(Name and Address of Surety)	(Name and Address of agent or representative for service for service of process in California)
_____	_____
_____	_____
Telephone:_____	Telephone: _____

STATE OF CALIFORNIA)
) ss.
COUNTY OF)

On this _____day of _____, in the year _____, before me, _____, a Notary Public in and for said State, personally appeared _____, known to me to be the person whose name is subscribed within the instrument as the Attorney-in-Fact of the (Surety) and acknowledged to me that he subscribed the name of the (Surety) thereto and his own name as Attorney-in-Fact.

_____ (SEAL)
Notary Public in and for said State

Commission expires:_____

NOTE: A copy of the power-of-attorney to local representatives of the bonding company must be attached hereto.

GUARANTEE

Guarantee for _____**,** We hereby guarantee that the **STEM Center Modulars II Phase B Interior IT/Data Installation at Norco College** has been done in accordance with the Contract, Documents, including without limitation, the drawings and specifications, and that the work as installed will fulfill the requirements included in the bid documents. The undersigned agrees to repair or replace any or all such work, together with any other adjacent work, which may be displaced in connection with such replacement, that may prove to be defective in workmanship or material within a period of _____ (_____) years from the date of the Notice of Completion of the above-mentioned structure by Riverside Community College District, ordinary wear and tear and unusual abuse or neglect excepted.

In the event the undersigned fails to comply with the above-mentioned conditions within a reasonable period of time, as determined by the DISTRICT, but not later than ten (10) days after being notified in writing by the DISTRICT, the undersigned authorizes the DISTRICT to proceed to have said defects repaired and made good at the expense of the undersigned, who will pay the costs and charges thereof upon demand.

	Countersigned
_____	_____
(Proper Name)	(Proper Name)
By: _____	By: _____
_____	_____
(Signature of Subcontract or Contractor)	(Signature of General Contractor if for Subcontractor)

Representatives to be contacted for service:

Name: _____

Address: _____

_____

Phone Number:_____

INSURANCE DOCUMENTS & ENDORSEMENTS

The following insurance endorsements and documents must be provided to the Riverside Community College District within ten (10) calendar days after receipt of notification of award. If the apparent low bidder fails to provide the documents required below, the District may award the contract to the next lowest responsible and responsive bidder or release all bidders, and the bidder's bid security will be forfeited. All insurance provided by the bidder shall fully comply with the requirements set forth in Article 11 of the General Conditions.

1. General Liability Insurance: Certificate of Insurance with all specific insurance coverages set forth in Article 11 of the General Conditions, proper Project description, designation of the District as the Certificate Holder, a statement that the insurance provided is primary to any insurance obtained by the District and minimum of 30 days' cancellation notice. Bidder shall also provide required additional insured endorsement(s) designating all parties required in Article 11 of the General Conditions. The additional insured endorsement shall be an ISO CG 20 10 (11/85) or an ISO CG 20 10 (10/93 or 07/04) and ISO CG 20 37 (10/93 or 07/04) or their equivalent as determined by the District in its sole discretion.

Incidents and claims are to be reported to the insurer at:

Attn: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

(_____) _____
(Telephone Number)

2. Workers' Compensation/ Employer's Liability Insurance: Certificate of Workers' Compensation Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum of 30 days' cancellation notice, proper Project description, waiver of subrogation and any applicable endorsements.

3. Automobile Liability Insurance: Certificate of Automobile Insurance meeting the coverages and requirements set forth in Article 11 of the General Conditions, minimum 30 days' cancellation notice, any applicable endorsements and a statement that the insurance provided is primary to any insurance obtained by the District.

Incidents and claims are to be reported to the insurer at:

Attn: _____
(Title) (Department)

_____
(Company)

_____
(Street Address)

_____
(City) (State) (Zip Code)

(_____) _____
(Telephone Number)

DATE:_____ _____
CONTRACTOR

By:_____
Signature

CONTRACTOR'S CERTIFICATE REGARDING DRUG-FREE WORKPLACE

This Drug-Free Workplace Certification form is required from all successful bidders pursuant to the requirements mandated by Government Code Sections 8350 et seq., the Drug-Free Workplace Act of 1990. The Drug-Free Workplace Act of 1990 requires that every person or organization awarded a contract or grant for the procurement of any property or service from any State agency must certify that it will provide a drug-free workplace by performing certain specified acts. In addition, the Act provides that each contract or grant awarded by a State agency may be subject to suspension of payments or termination of the contract or grant, and the CONTRACTOR or grantee may be subject to debarment from future contracting, if the contracting agency determines that specified acts have occurred.

Pursuant to Government Code Section 8355, every person or organization awarded a contract or grant from a State agency shall certify that it will provide a drug-free workplace by doing all of the following:

a) Publishing a statement, notifying employees that the unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited in the person's or organization's workplace, and specifying actions which will be taken against employees for violations of the prohibition;

b) Establishing a drug-free awareness program to inform employees about all of the following:

1) The dangers of drug abuse in the workplace;

2) The person's or organization's policy of maintaining a drug-free workplace;

3) The availability of drug counseling, rehabilitation and employee-assistance programs; and

4) The penalties that may be imposed upon employees for drug abuse violations;

c) Requiring that each employee engaged in the performance of the contract or grant be given a copy of the statement required by subdivision (a) and that, as a condition of employment on the contract or grant, the employee agrees to abide by the terms of the statement.

I, the undersigned, agree to fulfill the terms and requirements of Government Code Section 8355 listed above and will (a) publish a statement notifying employees concerning the prohibition of controlled substance at the workplace, (b) establish a drug-free awareness program, and (c) require each employee engaged in the performance of the contact be given a

copy of the statement required by section 8355(a) and require such employee agree to abide by the terms of that statement.

I also understand that if the Riverside Community College District determines that I have either (a) made a false certification herein, or (b) violated this certification by failing to carry out the requirements of Section 8355, that the contract awarded herein is subject to termination, suspension of payments, or both. I further understand that, should I violate the terms of the Drug-Free Workplace Act of 1990, I may be subject to debarment in accordance with the requirements of Sections 8350 et. seq.

I acknowledge that I am aware of the provisions of Government Code Sections 8350 et. seq. and hereby certify that I will adhere to the requirements of the Drug-Free Workplace Act of 1990.

DATE:_____

_____
CONTRACTOR

By:_____
Signature

CONTRACTOR'S CERTIFICATE REGARDING ALCOHOLIC BEVERAGE and TOBACCO-FREE CAMPUS POLICY

The CONTRACTOR agrees that it will abide by and implement the DISTRICT's Alcoholic Beverage and Tobacco-Free Campus Policy, which prohibits the use of alcoholic beverages and tobacco products, at any time, on DISTRICT-owned or leased buildings, on DISTRICT property and in DISTRICT vehicles. The CONTRACTOR shall procure signs stating "ALCOHOLIC BEVERAGE AND TOBACCO USE IS PROHIBITED" and shall ensure that these signs are prominently displayed in all entrances to school property at all times.

DATE:_____

_____
CONTRACTOR

By:_____
Signature

RIVERSIDE COMMUNITY COLLEGE DISTRICT

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

PURCHASING

MORENO VALLEY COLLEGE | NORCO COLLEGE | RIVERSIDE CITY COLLEGE

GENERAL CONDITIONS

STEM Center Modulars II Phase B Interior IT/Data Installation at Norco College`
Bid No. 2014/15-04-UCCAP

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ARTICLE 1

GENERAL CONDITIONS

1.1 BASIC DEFINITIONS

1.1.1 Action of the Governing Board is a vote of a majority of the District's governing board.

1.1.2 Approval means written authorization through action of the governing board. The governing board has delegated to the Vice Chancellor, Business and Financial Services, who has delegated the authority to the Associate Vice Chancellor, Facilities, Planning, Design and Construction to approve certain modifications, change orders or construction change directives where the aggregate sum of the changes do not exceed $15,000 and each individual item of the change order or modification does not exceed $10,000. In no case shall the Associate Vice Chancellor, Facilities, Planning, Design and Construction have authority to approve total change orders or modifications to the Project exceeding 10% of the contract sum.

1.1.3 Architect means the architect, engineer, or other design professional engaged by the District to design and perform general observation of the work of construction and interpret the drawings and specifications for the Project.

1.1.4 As shown, as indicated, as detailed refer to drawings accompanying this specification.

1.1.5 Contract or Agreement When the terms are used in these General Conditions shall be references to the Contract Documents as defined herein.

1.1.6 The Contract Documents The Contract Documents consist of the Agreement between District and Contractor (hereinafter the Agreement or Contract), Conditions of the Contract (General, Supplementary and other Conditions), Drawings, Specifications, addenda issued prior to bid, instructions to bidders, notice to bidders, and the requirements contained in the Bid Documents, other documents listed in the Agreement, and Modifications issued after execution of the Contract. A Modification is a written amendment to the Contract signed by parties, a Change Order, a Construction Change Directive, or a written order for a minor change in the Work issued by the Architect. The Contract Documents collectively form the Contract. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations, or agreements, either written or oral. The Contract may be amended or modified only by a written Modification. The Contract Documents shall not be construed to create a contractual relationship of any kind between the Architect and Contractor, between the District and any Subcontractor or Sub-subcontractor, or between any persons or entities other than the District and the Contractor. The Architect shall, however, be entitled to performance and enforcement of obligations under the Contract intended to facilitate performance of the Architect's duties.

1.1.7 Contractor, District, and Architect are those mentioned as such in the Agreement. They are treated throughout the Contract Documents as if they are of singular number and neuter gender. Any reference to "Owner" shall mean "District."

1.1.8 Days means calendar days.

1.1.9 Inspector of Record is the individual retained by the District in accordance with titles 21 and 24 of the California Code of Regulations and who will be assigned to the Project.

1.1.10 The Drawings are graphic and pictorial portions of the Contract Documents prepared for the Project and approved changes thereto, wherever located and whenever issued, showing the design, location, and scope of the Work, generally including plans, elevations, sections, details, schedules, and diagrams as drawn or approved by the Architect.

1.1.11 Emergency shall be defined as a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Emergency includes such occurrences as fire, flood, earthquake, or other soil or geologic movements, as well as such occurrences as riot, accident, or sabotage.

1.1.12 Locality in which the work is performed means the county in which the Project is located.

1.1.13 The Project is the complete construction of the Work performed in accordance with the Contract Documents.

1.1.14 The Project Manual The Project Manual is the volume assembled for the Work which may include, without limitation, the bidding requirements, sample forms, Conditions of the Contract, and Specifications.

1.1.15 Provide shall include "provide complete in place," that is "furnish and install."

1.1.16 Safety Orders are those issued by any cognizant city, county, state or federal agency.

1.1.17 Site refers to the grounds of the Project as defined in the Contract Documents and such adjacent lands as may be directly affected by the performance of the Work.

1.1.18 The Specifications The Specifications are that portion of the Contract Documents consisting of the written requirements for material, equipment, construction systems, instructions, quality assurance standards, workmanship, and performance of related services.

1.1.19 Standards, Rules, and Regulations referred to are recognized printed standards and shall be considered as one and a part of these specifications within limits specified. Federal, state and local regulations are incorporated into the Contract Documents by reference.

1.1.20 Subcontractor, as used herein, includes those having direct or indirect contracts with Contractor and ones who furnished labor, material or services for a special design according to plans, drawings, and specifications of this Work, but does not include ones who merely furnish material not so worked.

1.1.21 Surety is the person, firm, or corporation that executes as surety the Contractor's Performance Bond and Payment Bond.

1.1.22 Work of the Contractor or Subcontractor shall include all labor, materials and equipment necessary for the Contractor to fulfill all of its obligations pursuant to the Contract Documents. It shall include the initial obligation of any Contractor or Subcontractor who performs any portion of the Work, to visit the Site of the proposed Work (a continuing obligation after the commencement of the Work), to fully acquaint and familiarize itself with the conditions as they exist and the character of the operations to be carried out under the Contract Documents, and make such investigation as it may see fit so that it shall fully understand the facilities, physical conditions, and restrictions attending the Work under the Contract Documents. Each such Contractor or Subcontractor shall also thoroughly examine and become familiar with the Drawings, Specifications, and associated bid documents before preparing and submitting any bid.

1.1.23 Workers includes laborers, workers, and mechanics.

1.2 EXECUTION, CORRELATION AND INTENT

1.2.1 Correlation and Intent

1.2.1.1 *Documents Complementary and Inclusive*. The Contract Documents are complementary and are intended to include all items required for the proper execution and completion of the Work. All Contract Documents form the Contractor's contract with the District. Any item of Work mentioned in the Specifications and not shown on the Drawings, or shown on the Drawings and not mentioned in the Specifications, shall be provided by Contractor as if shown or mentioned in both.

1.2.1.2 *Coverage of the Drawings and Specifications*. The Drawings and Specifications generally describe the Work to be performed by Contractor. Generally, the Specifications describe Work which cannot be readily indicated on the Drawings and indicate types, qualities, and methods of installation of the various materials and equipment required for the Work. It is not intended to mention every item of Work in the Specifications, which can be adequately shown on the Drawings, or to show on the Drawings all items of Work described or required by the Specifications even if they are of such nature that they could have been shown. All materials or labor for Work, which is shown on either the Drawings or the Specifications (or is reasonably inferable

therefrom as being necessary to complete the Work), shall be provided by the Contractor to provide a complete project. It is intended that the Work be of sound, quality construction, and the Contractor shall be responsible for the inclusion of adequate amounts to cover installation of all items indicated, described, or implied in the portion of the Work to be performed by them.

1.2.1.3 *Conflicts*. In the event there is a discrepancy between the various Contract Documents, it is intended that the more stringent, higher quality, and greater quantity of Work shall apply.

1.2.1.4 *Conformance With Laws*. Each and every provision of law required by law to be inserted in this Contract shall be deemed to be inserted herein, and the Contract shall be read and enforced as though it were included herein, even if through mistake or otherwise any such provision is not inserted, or is not correctly inserted.

Before commencing any portion of the Work, Contractor shall check and review the Drawings and Specifications for such portion for conformance and compliance with all laws, ordinances, codes, rules and regulations of all governmental authorities and public and municipal utilities affecting the construction and operation of the physical plant of the Project, all quasi-governmental and other regulations affecting the construction and operation of the physical plant of the Project, and other special requirements, if any, designated in the Contract Documents. Such checking shall include Title 21 and Title 24 of the California Code of Regulations, California Building Code, local utility, local water connection, local grading and all other applicable agencies. In the event Contractor observes any violation of any law, ordinance, code, rule or regulation, or inconsistency with the Contract Documents, Contractor shall, within five (5) days, notify Architect and District in writing of same and shall ensure that any such violation or inconsistency shall be corrected in the manner provided hereunder prior to the construction of that portion of the Project.

The Contractor shall bear all expenses of correcting Work done contrary to said laws, ordinances, rules, and regulations if the Contractor performed same (1) without first consulting the Architect for further instructions regarding said Work or (2) disregarded the Architect's instructions regarding said work.

1.2.1.5 *Ambiguity and Inconsistency*. Before commencing any portion of the Work, Contractor shall carefully examine all Drawings and Specifications and other information given to Contractor as to materials and methods of construction and other Project requirements. Contractor shall, within five (5) days, notify Architect and District in writing of any perceived or alleged error, inconsistency, conflict, ambiguity, or lack of detail or explanation in the Drawings and Specifications in the manner provided herein. If the Contractor or its Subcontractors, material or equipment suppliers, or any of their officers, agents, and employees performs, permits, or causes the performance of any Work under the Contract Documents, which it knows or should have known to be in error, inconsistent, or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all costs arising therefrom including, without limitation, the cost of correction thereof without increase or adjustment to the Contract Price or the time for

performance. If Contractor performs, permits, or causes the performance of any Work under the Contract Documents prepared by or on behalf of Contractor which is in error, inconsistent or ambiguous, or not sufficiently detailed or explained, Contractor shall bear any and all resulting costs, including, without limitation, the cost of correction, without increase to or adjustment in the Contract Price or the time for performance.

1.2.2 Addenda and Deferred Approvals

1.2.2.1 *Addenda* are the changes in specifications, drawings, contract documents, and plans which have been authorized in writing by the District or Architect, and which alter, explain, or clarify the contract documents. Addenda shall govern over all other Contract Documents. Subsequent addenda issued shall govern over prior addenda unless otherwise specified in the addenda.

1.2.2.2 *Deferred Approvals*. Contract Documents which require deferred approval items are meant to be for illustration purposes only. Contractor is responsible for all deferred approval requirements set forth in the Contract Documents. Contractor is responsible to comply with all laws, building codes, and regulations necessary to obtain all necessary approvals, including those required from the Division of the State Architect ("DSA") and the State Fire Marshall. Contractor shall not be granted an extension of time for failure to obtain necessary approvals due to failure to comply with laws, building codes, and other regulations (including Title 24 of the California Code of Regulations). Contractor shall schedule all deferred approval items in its progress schedule pursuant to Article 3. If Contractor fails to include deferred-approval items in its schedule which results in a critical path delay, then Contractor shall be subject to the assessment of liquidated damages.

1.2.3 Specification Interpretation

1.2.3.1 *Titles*. The Specifications are separated into titled sections for convenience only and not to dictate or determine the trade or craft involved.

1.2.3.2 *As Shown, Etc*. Where "as shown," "as indicated," "as detailed," or words of similar import are used, reference is made to the Drawings accompanying the Specifications unless otherwise stated. Where "as directed," "as required," "as permitted," "as authorized," "as accepted," "as selected," or words of similar import are used, the direction, requirement, permission, authorization, approval, acceptance, or selection by Architect is intended unless otherwise stated.

1.2.3.3 *General Conditions*. The General Conditions and supplementary general conditions are a part of each and every section of the Specifications.

1.2.3.4 *Abbreviations*. In the interest of brevity, the Specifications are written in an abbreviated form and may not include complete sentences. Omission of words or phrases such as "Contractor shall," "shall be," etc., are intentional. Nevertheless, the requirements of the Specifications are mandatory. Omitted words or phrases shall be supplied by inference in the same manner as they are when a "note" occurs on the

Drawings. In the interest of brevity, the Contract Documents frequently omit modifying words such as "all" and "any" and articles such as "the" and "an," but the fact that a modifier or an article is absent from one statement and appears in another is not intended to affect the interpretation of either statement.

1.2.3.5 *Plural*. Words in the singular shall include the plural whenever applicable or the context so indicates.

1.2.3.6 *Metric*. The Specifications may indicate metric units of measurement as a supplement to U.S. customary units. When indicated thus: 1" (25 mm), the U. S. customary unit is specific, and the metric unit is nonspecific. When not shown with parentheses, the unit is specific. The metric units correspond to the "International System of Units" (SI) and generally follow ASTM E 380, "Standard for Metric Practice."

1.2.3.7 *Standard Specifications*. Any reference to standard specifications of any society, institute, association, or governmental authority is a reference to the organization's standard specifications, which are in effect at the date of the Contractor's proposal unless directed otherwise. If applicable specifications are revised prior to completion of any part of the Work, the Contractor may, if acceptable to Architect, perform such Work in accordance with the revised specifications. The standard specifications, except as modified in the Specifications for the Project, shall have full force and effect as though printed in the Specifications. Architect will furnish, upon request, information as to how copies of the standard specifications referred to may be obtained.

1.2.4 Rules of Document Interpretation

1.2.4.1 In the event of conflict within the drawings, the following rules shall apply:

(a) General Notes, when identified as such, shall be incorporated into other portions of Drawings.

(b) Schedules, when identified as such, are complementary with other notes and other portions of Drawings including those identified as General Notes.

(c) Larger scale drawings shall take precedence over smaller scale drawings.

(d) At no time shall the Contractor base construction on scaled drawings.

1.2.4.2 Specifications shall govern as to materials, workmanship, and installation procedures.

1.2.4.3 If Contractor observes that drawings and specifications are in conflict, Contractor shall, within five (5) days, notify the Architect in writing for the purposes of obtaining an interpretation of the Contact Documents.

1.2.4.4 In the case of conflict or inconsistencies, the order of precedence shall be as follows:

(a) General Conditions take precedence over Drawings and Specifications.

(b) Special Conditions take precedence over General Conditions.

(c) The Agreement shall take precedent over the Special Conditions.

(d) In the case of disagreement or conflict between or within standards, specifications, and drawings, the more stringent, higher quality, and greater quantity of Work shall apply.

1.3 OWNERSHIP AND USE OF ARCHITECT'S DRAWINGS, SPECIFICATIONS AND OTHER DOCUMENTS

The Drawings, Specifications, and other contract documents for the Project are the property of the District and/or Architect pursuant to Education Code § 17316. The Contractor may retain one contract record set. Neither the Contractor nor any Subcontractor, or material or equipment supplier shall own or claim a copyright in the Drawings, Specifications, and other documents prepared by the Architect. All copies except the Contractor's record set, shall be returned or properly accounted for upon completion of the Work. The Drawings, Specifications, and other documents prepared by the Architect, and copies thereof furnished to the Contractor are not to be used by the Contractor or any Subcontractor, Sub-subcontractor, or material or equipment supplier on other projects or for additions to this Project outside the scope of the Work. The District and/or Architect hereby grants the Contractor, Subcontractors, Sub-subcontractors, and material or equipment suppliers a limited license to use applicable portions of the Drawings, Specifications, and other documents prepared for the Project in the execution of their Work under the Contract Documents. Submittal or distribution to meet official regulatory requirements or for other purposes in connection with this Project is not to be construed as publication in derogation of the District's property interest or other reserved right.

ARTICLE 2

DISTRICT

2.1 INFORMATION AND SERVICES REQUIRED OF THE DISTRICT

2.1.1 Site Survey.

The District will furnish, at its expense, a legal description of the Site and a land survey showing the boundaries of the Site. Contractor shall be responsible for all surveys regarding location of construction, grading and site work.

2.1.2 Soils.

When required by the scope of the Project, the District will furnish, at its expense, the services of geotechnical engineers or consultants when reasonably required and deemed necessary by the Architect or as required by local or state codes. Such services, with written reports and appropriate written professional recommendations, may include test boring, test pits, soil bearing values, percolation tests, air and water pollution tests, and ground corrosion and resistivity tests, including necessary operations for determining subsoil, air, and water conditions.

2.1.3 Contractor Reliance.

A soils investigation report has been obtained from test holes at the Site, and such report is available for the Contractor's use in preparing its bid and Work under this Contract. The soils report is available at the Architect's office for review. Any information obtained from such report or any other information given on drawings as to subsurface soil condition or to elevations of existing grades or elevations of underlying rock is approximate only. If, during the course of Work under this Contract, Contractor encounters subsurface conditions which differ materially from those indicated in the soils investigation report, then Contractor shall notify the District within five (5) calendar days of discovery of the condition, and changes to the contract price may be made in accordance with Article 7 entitled "Changes in the Work." Contractor agrees that no claim against District will be made by Contractor for damages and hereby waives any rights to damages in the event the Contractor fails to notify District within the five-day period mentioned above.

WARNING: DISTRICT DOES NOT WARRANT THE SOILS AT THE PROJECT SITE. SOILS INVESTIGATION REPORT IS PROVIDED FOR CONTRACTORS INFORMATION ONLY. CONTRACTOR HAS CONDUCTED AN INDEPENDENT INVESTIGATION OF THE PROJECT SITE AND THE SOILS CONDITIONS OF THE SITE. DISTRICT DOES NOT WARRANT THE SOILS CONDITIONS OF THE SITE AND CONTRACTOR IS FULLY RESPONSIBLE TO ASCERTAIN SITE CONDITIONS FOR THE PURPOSES OF DETERMINING CONSTRUCTION MEANS AND METHODS PRIOR TO COMMENCING CONSTRUCTION. THE SOILS INVESTIGATION REPORT IS NOT A CONTRACT DOCUMENT.

2.1.4 Utilities.

2.1.4.1 *Regional Notification Center*. Contractor, except in an emergency, shall contact the appropriate regional notification center at least two working days prior to commencing any excavation if the excavation will be conducted in an area or in a private easement which is known, or reasonably should be known, to contain subsurface installations other than the underground facilities owned or operated by the District, and obtain an inquiry identification number from that notification center. No excavation shall be commenced and carried out by the Contractor unless such an inquiry identification

number has been assigned to the Contractor or any subcontractor of the Contractor and the District has been given the identification number by the Contractor. Any damages arising from failure to make appropriate regional notification shall be at the sole risk of Contractor. Any delays caused by failure to make appropriate regional notification shall be at the sole risk of Contractor and shall not be considered for extension of time pursuant to Paragraph 8.4.

2.1.4.2 *Utilities - Removal and Restoration*

The District has endeavored to determine the existence of utilities at the Site of the Work from the records of the District of known utilities in the vicinity of the Work. The positions of these utilities as derived from such records are shown in the Contract Documents.

No excavations were made to verify the locations shown for underground utilities. The service connections to these utilities may not be shown on the plans. It shall be the responsibility of the Contractor to determine the exact location of all service connections. The Contractor shall make its own investigations, including exploratory excavations, to determine the locations and type of service connections, prior to commencing work which could result in damage to such utilities. The Contractor shall immediately notify the District's representative as to any utility discovered by Contractor in a different position than shown in the Contract Documents or which is not shown on the Contract Documents.

Contractor shall coordinate its Work with all utilities, including, but not limited to electricity, water, gas and telephone and meet with said utilities prior to the start of any work.

2.1.4.3 *Other Utilities*.

In case it should be necessary to remove, relocate, or temporarily maintain a utility because of interference with the Work, the work on the utility shall be performed and paid for as follows:

When it is necessary to remove, relocate or temporarily maintain a service connection, the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the service connection. The work on the service connection shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the service connection has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is in the position shown on the plans, the cost of which is not required to be borne by the owner thereof, the Contractor shall bear all expenses incidental to the work on the utility. The work on the utility shall be done in a manner satisfactory to the owner thereof; it being understood that the owner of the utility has the option of doing such work with his own forces or permitting the work to be done by the Contractor.

When it is necessary to remove, relocate, or temporarily maintain a utility which is not shown on the plans or is in a position different from that shown on the plans and were it in the position shown on the plans would not need to be removed, relocated, or temporarily maintained, and the cost of which is not required to be borne by the owner thereof, the District will make arrangements with the owner of the utility for such work to be done at no cost to the Contractor, or will require the Contractor to do such work in accordance with Article 7 or will make changes in the alignment and grade of the Work to obviate the necessity to remove, relocate, or temporarily maintain the utility. Changes in alignment and grade will be ordered in accordance with Article 7 herein.

No representations are made that the obligations to move or temporarily maintain any utility and to pay the cost thereof is or is not required to be borne by the owner of such utility, and it shall be the responsibility of the Contractor to investigate to find out whether said cost is required to be borne by the owner of the utility.

The right is reserved to governmental agencies and to owners of utilities to enter at any time upon any street, alley, right-of-way, or easement for the purpose of making changes in their property made necessary by the Work and for the purpose of maintaining and making repairs to their property.

2.1.5 Existing Utility Lines; Removal, Relocation.

2.1.5.1 *Main or Trunkline Facilities*

If the Contractor while performing the contract discovers utility facilities not identified by the District in the Contract Documents, Contractor shall, within five (5) days, notify the District and utility in writing.

The District has the responsibility to identify, with reasonable accuracy, main or trunkline facilities on the plans and specifications. In the event that main or trunkline utility facilities are not identified with reasonable accuracy in the plans and specifications and made a part of the Notice Inviting Bids, District shall assume the responsibility for their timely removal, relocation, or protection.

The owner of the public utility shall have the sole discretion to perform repairs or relocation work or permit the Contractor to do such repairs or relocation work at a reasonable price.

The Contractor shall exercise reasonable care and shall be compensated by the District for the actual verified field costs of locating, and removing, relocating, protecting or temporarily maintaining such main or trunkline utility facilities not indicated with reasonable accuracy in the plans and specifications, and for equipment in use on the project necessarily idled during such work. This work shall be performed in accordance with Article 7 of these General Conditions.

Alternatively, District may make changes in the alignment and grade of the work to obviate the need to remove, relocate, or temporarily maintain the utility, in accordance

with Article 7 or District may make arrangements with the owner of the utility for such work to be done at no cost to the Contractor.

The Contractor shall not be assessed a forfeiture for delay in completion of the Project when such delay is caused by the failure of the District or the owner of the utility to provide for the removal, relocation, protection or temporary maintenance of all such main or trunkline facilities not indicated with reasonable accuracy.

Nothing herein shall preclude the District from pursuing any appropriate remedy against the utility for delays which are the responsibility of the utility.

Nothing herein shall be construed to relieve the utility from any obligation as required either by law or by contract to pay the cost of removal or relocation of existing utility facilities.

2.1.5.2 *Assessment*. These subparagraphs shall not be construed to preclude assessment against the Contractor for any other delays in completion of the Work. Nothing in these subparagraphs shall be deemed to require the District to indicate the presence of existing service laterals or appurtenances whenever the presence of such utilities on the Site can be inferred from the presence of other visible facilities, such as buildings, or meter junction boxes on or adjacent to the Site.

2.1.5.3 *Notification*. If the Contractor, while performing Work under this Contract, discovers utility facilities not identified by the District in the Contract Documents. Contractor shall, within five (5) days, notify the District and the utility in writing. If Contractor fails to notify the District within forty eight hours after discovery of any utility facilities not identified by District in the Contract Documents, Contractor waives all rights to be compensated for any extra Work or damages resulting from such discovered utilities.

2.1.6 Easements.

District shall secure and pay for easements for permanent structures or permanent changes in existing facilities, if any, unless otherwise specified in the Contract Documents.

2.2 DISTRICT'S RIGHT TO CARRY OUT THE WORK

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, including, but not limited to:

1. Failure to supply adequate workers on the entire Project or any part thereof;
2. Failure to supply a sufficient quantity of materials;
3. Failure to perform any provision of this Contract;
4. Failure to comply with safety requirements, or due to Contractor's creation of an unsafe condition;

5. In the case of bona fide emergency;
6. Failure to order materials in a timely manner;
7. Failure to prepare deferred-approval items or shop drawings in a timely manner;
8. Failure to comply with Contractor's schedule which would result in a delay to the critical path;
9. Failure to comply with the Subletting and Subcontracting Fair Practices, Public Contract Code section 4100, et seq.

If the Contractor defaults or neglects to carry out the Work in accordance with the Contract Documents, and fails (within a five-day period after receipt of written notice or a shorter time period expressly stated in the written notice from the District in an emergency situation) to commence and continue correction of such default with diligence and promptness, the District may correct such deficiencies without prejudice to other remedies the District may have, including those set forth in Article 14 after providing five-day written notice to Contractor and Surety. If during this five (5) day period, Surety personally delivers notice to District that it intends to perform such work, District shall allow Surety seven (7) days to perform. In an emergency situation, the District may correct such deficiencies without prejudice to other remedies the District may have, including those set forth in Article 14 after providing 48 hours notice to the Contractor. In either case, the Contractor will be invoiced the cost of correcting such deficiencies, including compensation for additional services and expenses made necessary by such default, or neglect. The invoice amount shall be deducted from the next payment due the Contractor. If payments then or thereafter due the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District.

ARTICLE 3

THE CONTRACTOR

3.1 SUPERVISION AND CONSTRUCTION PROCEDURES

3.1.1 Contractor.

The Contractor shall continually supervise and direct the Work using the Contractor's best skill and attention. The Contractor shall be solely responsible for and have control over construction means, methods, techniques, sequences, procedures; and shall coordinate all portions of the Work under the Contract, unless the Contract Documents give other specific instructions concerning these matters. The Contractor shall not perform the Work without utilizing the Contract Documents or, where required, approved shop drawings, product data, or samples for any such portion of the work. If any of the Work is performed by contractors retained directly by the District, Contractor shall be responsible for the coordination and sequencing of the work of those other contractors so as to avoid any impact on the project schedule pursuant to the requirements of Article 6 and Article 8. Specific duties of the Contractor shall include those set out in Section 43 of Title 21 of the California Code of Regulations and Section 4-343 of Title

24 of the California Code of Regulations. These duties include, but are not limited to the following:

(a) Responsibilities. It is the duty of the Contractor to complete the Work covered by his or her contract in accordance with the approved plans and specifications. The Contractor in no way is relieved of any responsibility by the activities of the Architect, Engineer, Inspector or DSA in the performance of their duties.

(b) Performance of the work. The Contractor shall carefully study the approved plans and specifications and shall plan its schedule of operations well ahead of time. If at any time it is discovered that work is being done which is not in accordance with the approved plans and specifications, the contractor shall correct the work immediately.

All inconsistencies or times which appear to be in error in the plans and specifications shall promptly be called to the attention of the Architect or, Engineer, for interpretation or correction. Local conditions which may affect the structure shall be brought to the Architect's attention at once. In no case, shall the instruction of the Architect be construed to cause work to be done which is not in conformity with the approved plans, specifications, change orders, construction change directives, and as required by law.

The Contractor shall not carry on Work except with the knowledge of the Inspector of Record.

(c) Verified Reports. The Contractor shall make and submit to the office from time to time, verified reports as required in Section 36 of Title 21 and Section 4-366 of Title 24.

Contractor shall fully comply with any and all reporting requirements of Education Code Sections 17315, et seq., in the manner prescribed by Title 24, as applicable.

3.1.2 Contractor Responsibility.

The Contractor shall be responsible to the District for acts and omissions of the Contractor's employees, Subcontractors, material and equipment suppliers, and their agents, employees, invitees, and other persons performing portions of the Work under direct or indirect contract with the Contractor or any of its Subcontractors.

3.1.3 Obligations not Changed by Architect's Actions.

The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract or by tests, inspections, or approvals required or performed by persons other than the Contractor.

3.1.4 Acceptance/Approval of Work.

The Contractor shall be responsible to determine when any completed portions of the Work already performed under this Contract or provided pursuant to Article 6 are suitable to receive subsequent Work thereon.

3.1.5 Performance of Work With Own Force.

Contractor shall perform at least 15% of the Work, exclusive of supervisory and clerical work without the services of any subcontractor. Contractor shall supervise and direct the work competently and efficiently, devoting such attention thereto and applying such skills as may be necessary to perform the Work in accordance with the Contract Documents.

3.2 SUPERVISION

3.2.1 Full Time Supervision.

Unless personally present on the Project site where the Work is being performed, the Contractor shall keep on the Work at all times during its progress a competent construction Superintendent satisfactory to the District. The Superintendent shall be present on a full-time basis, shall be dedicated exclusively to the Project and shall not share superintendency duties with another project or job. The Superintendent shall not be replaced except with written consent of the District. The Superintendent shall represent the Contractor in its absence and shall be fully authorized to receive and fulfill any instruction from the Architect, the Inspector, the District or any other District representative. All Requests for Information shall be originated by the Superintendent and responses thereto shall be given to the Superintendent. No Work shall begin on any day by any Subcontractor or other person on the Project site until the Superintendent has arrived, or shall any Work continue during the day after the Superintendent has departed from the Project site. The Superintendent shall have authority to bind Contractor through the Superintendent's acts. The Superintendent shall represent the Contractor, and communications given to the Superintendent shall be binding on the Contractor. Before commencing the Work, Contractor shall give written notice to District and Architect of the name and a Statement of Qualifications of such superintendent. Superintendent shall not be changed except with written consent of District, unless a superintendent proves to be unsatisfactory to Contractor and ceases to be in its employ, in which case, Contractor shall notify District and Architect in writing. Contractor shall provide a replacement superintendent approved by the District prior to performing additional work.

3.2.2 Staff.

Notwithstanding other requirements of the contract documents, the Contractor and each Subcontractor shall: (1) furnish a competent and adequate staff as necessary for the proper administration, coordination, supervision, and superintendence of its portion of the Work; (2) organize the procurement of all materials and equipment so that the materials and equipment will be available at the time they are needed for the Work; and (3) keep an

adequate force of skilled and fit workers on the job to complete the Work in accordance with all requirements of the Contract Documents.

3.2.3 Right to Remove.

District shall have the right, but not the obligation, to require the removal from the Project of any superintendent, staff member, agent, or employee of any Contractor, Subcontractor, material or equipment supplier.

3.3 LABOR AND MATERIALS

3.3.1 Contractor to Provide.

Unless otherwise provided in the Contract Documents, the Contractor shall provide and pay for labor, material, equipment, tools, construction equipment and machinery, water, heat, air conditioning, utilities, transportation, and other facilities, services and permits necessary for proper execution and completion of the Work whether temporary or permanent and whether or not incorporated or to be incorporated in the Work.

3.3.2 Quality.

Unless otherwise specified, all materials and equipment to be permanently installed in the Project shall be new and shall be of the highest quality or as specifically stated in the Contract Documents. The Contractor shall, if requested, furnish satisfactory evidence as to kind and quality of all materials and equipment within ten (10) days of a written request by the District, including furnishing the District with bona fide copies of invoices for materials or services provided on the Project. All labor shall be performed by workers skilled in their respective trades, and shall be of the same or higher quality as with the standards of other school construction.

3.3.3 Replacement.

Any work, materials, or equipment, which do not conform to these requirements or the standards set forth in the Contract Documents, may be disapproved by the District, in which case, they shall be removed and replaced by the Contractor at no additional cost or extension of time to the District.

3.3.4 Discipline.

The Contractor shall enforce strict discipline and good order among the Contractor's and Subcontractor's employees, and other persons carrying out the Contract. The Contractor shall not permit employment of unfit persons or persons not skilled in tasks assigned to them. As used in this subsection, "unfit" includes any person who the District concludes is improperly skilled for the task assigned to that person, who fails to comply with the requirements of this article, or who creates safety hazards which jeopardize other persons and/or property.

3.3.5 Noise, Drugs, Tobacco, and Alcohol.

Contractor shall take all steps necessary to insure that employees of Contractor or any of its subcontractors' employees do not use, consume, or work under the influence of any alcohol, tobacco or illegal drugs while on the project. Contractor shall further prevent any of its employees or its subcontractor employees from playing any recorded music devices or radios or wearing any radio headphone devices for entertainment while working on the project. Likewise, Contractor shall prevent its employees or subcontractor's employees from bringing any animal onto the project. Contractors shall not violate any written school policies.

3.3.6 Delivery of Material.

Contractor shall place orders for materials or equipment so that the Work may be completed in accordance with the Construction schedule for the Work as set forth in Article 8 of this Agreement. Contractor shall, upon demand from the Architect, furnish to the Architect documentary evidence including, but not limited to purchase orders, invoices, bills of materials, work orders and bills of lading, showing that orders have been placed.

3.3.7 Liens and Other Security Interests of Subcontractors and Material Suppliers.

No material, supplies, or equipment for the Work shall be purchased subject to any chattel mortgage or under a conditional sale or other agreement by which an interest therein or in any part thereof is retained by seller or supplier. Contractor warrants good title to all material, supplies, and equipment installed or incorporated in Work and agrees upon completion of all Work to deliver premises, together with all improvements and appurtenances constructed or placed thereon by it, to District free from any claims, security interests, liens, or charges. Contractor further agrees that neither it nor any person, firm, or corporation furnishing any materials or labor for any Work covered by this Contract shall have any right to place a lien upon the premises or any improvement or appurtenance thereof, except that Contractor may install metering devices or other equipment of a utility company or political subdivision, title to which is commonly retained by the utility company or political subdivision. In event of installation of any such metering device or equipment, Contractor shall advise District as to its owner within five (5) days of such installation in writing, prior to making the installation.

3.3.8 Title to Materials.

The title to new materials or equipment for the Work of this Contract, and attendant liability for its protection and safety, shall remain with Contractor until incorporated in the Work of this Contract and accepted by the District and Architect; no part of said materials shall be removed from its place of storage, and Contractor shall keep an accurate inventory of all said materials and equipment in a manner satisfactory to the District or its authorized representative.

3.3.9 Assemblies.

For all material and equipment specified or indicated in the Drawings, the Contractor shall provide all labor, materials, equipment, and services necessary for complete assemblies and complete working systems. Incidental items not indicated on the Drawings, nor mentioned in the Specifications, that can legitimately and reasonably be inferred to belong to the Work described, or be necessary in good practice to provide a complete assembly or system, shall be furnished as though itemized in the Contract Documents in every detail. In all instances, material and equipment shall be installed in strict accordance with each manufacturer's most recent published recommendations and specifications.

3.3.10 Noise Control.

The Contractor shall be responsible for the installation of noise reducing devices on construction equipment. Contractor shall comply with the requirements of the city and county having jurisdiction with regard to noise ordinances governing construction sites and activities. Construction equipment noise is subject to the control of the Environmental Protection Agency's Noise Control Program (Part 204 of Title 40, Code of Federal Regulations). If school is in session at any point during the progress of the Project, and, in the District's reasonable discretion, the noise from such Work disrupts or disturbs the students or faculty or the normal operation of the school, at the District's request, the Contractor shall schedule the performance of all such Work around normal school hours or make other arrangements so that the Work does not cause such disruption or disturbance. Specific attention shall be paid to work noise during final exams week in the months of December and June, as well as the week of commencement in June. Contractor shall be responsible for inquiring with District as to the specific dates of these events. District shall notify Contractor of any other time frames during the academic year where particular attention should be paid to noise control. In no event shall Contractor have a right to receive additional compensation or an extension to the contract time as a result of any such rescheduling or the making of such arrangements. These controls shall be implemented during site preparation and construction.

3.4 WARRANTY

The Contractor warrants to the District and Architect that material and equipment furnished under the Contract will be of the highest quality and new unless otherwise required or permitted by the Contract Documents, that the Work will be free from defects not inherent in the quality required or permitted, and that the Work will conform with the requirements of the Contract Documents. Work not conforming to these requirements, including substitutions not properly approved and authorized, may be considered defective. Contractor's warranty to District includes, but is not limited to the following representations:

(a) In addition to any other warranties provided elsewhere, Contractor shall, and hereby does, warrant all Work after the date of Notice of Completion of Work by District and shall repair or replace any or all such work, together with any

other work, which may be displaced in so doing that may prove defective in workmanship or materials within a one (1) year period from date of completion as defined in Public Contract Code Section 7107(c) without expense whatsoever to District, ordinary wear and tear, unusual abuse or neglect excepted. District will give notice of observed defects with reasonable promptness. Contractor shall notify District upon completion of repairs.

(b) In the event of failure of Contractor to comply with above mentioned conditions within one week after being notified in writing, District is hereby authorized to proceed to have defects repaired and made good at expense of Contractor who hereby agrees to pay costs and charges therefore immediately on demand.

(c) If, in the opinion of the District, defective Work creates a dangerous condition or requires immediate correction or attention to prevent further loss to the District, the District will attempt to give the notice required by this Article. If the Contractor cannot be contacted or does not comply with the District's requirements for correction within a reasonable time as determined by the District, the District may, notwithstanding the provisions of this article, proceed to make such correction or attention which shall be charged against Contractor. Such action by the District will not relieve the Contractor of the guarantee provided in this Article or elsewhere in this Contract.

(d) This Article does not in any way limit the guarantee on any items for which a longer warranty is specified or on any items for which a manufacturer gives a guarantee for a longer period. Contractor shall furnish District all appropriate guarantee or warranty certificates upon completion of the project.

3.5 TAXES

Contractor will pay all applicable Federal, State, and local taxes on all materials, labor, or services furnished by it, and all taxes arising out of its operations under the Contract Documents. District is exempt from Federal Excise Tax, and a Certificate of Exemption shall be provided upon request.

3.6 PERMITS, FEES AND NOTICES

3.6.1 Payment.

The Contractor shall secure and pay for all permits and governmental fees, licenses, and inspections necessary for proper execution and completion of the Work which are necessary after execution of the Contract and are legally required by any authority having jurisdiction over the Project, except those required by the Division of the State Architect (DSA). District shall be responsible for all testing and inspection as required by the DSA on-site or within the distance limitations set forth in Paragraph 13.5.2, unless a different mileage range is specified in the Special Conditions.

3.6.2 Compliance.

The Contractor shall comply with and give notices required by any law, ordinance, rule, regulation, and lawful order of public authorities bearing on performance of the Work.

3.6.3 Responsibility.

The Contractor shall perform all Work in conformance with every law, statute, ordinance, building code, rule or regulation. The Contractor shall assume full responsibility for such Work and shall bear the attributable cost of correction or project delay.

3.7 [RESERVED]

3.8 CONTRACTOR'S CONSTRUCTION SCHEDULES

3.8.1 Requirements.

(a) Within ten (10) calendar days after being awarded the contract, Contractor shall submit a progress schedule for District's approval. The schedule shall not exceed time limits set forth in the Contract Documents and shall comply with all of the scheduling requirements as set forth in the Specifications. Failure to submit a schedule or submittal of a schedule which shows completion of the Work beyond the specified completion date shall be deemed a material breach by the Contractor. The schedule must indicate the beginning and completion of all phases of construction and shall use the "critical path method" (commonly called CPM) for the value reporting, planning and scheduling, of all Work required under the Contract Documents. The scheduling is necessary for the District's adequate monitoring of the progress of the Work and shall be prepared in accordance with the time frame described in Article 8 of the General Conditions. The architect may disapprove of any schedule or require modification to it if, in the opinion of the Architect or District, adherence to the progress schedule will not cause the Work to be completed in accordance with the Agreement.

(b) Contractor shall not submit a schedule showing early completion without indicating float time through the date set for Project completion by District. Contractor's schedule shall account for all days past early completion as float which belongs to the Project. Usage of float shall not entitle Contractor to any delay claim or damages due to delay.

(c) Contractor shall not be granted an extension of time for failure to obtain necessary approvals for deferral approvals due to failure to comply with laws, building codes, and other regulations (including Title 24 of the California Code of Regulations). Contractor shall schedule all deferred approval items and shop drawings in its progress schedule. If Contractor fails to include deferred approval

items and shop drawings in its schedule which results in a critical path delay, then Contractor shall be subject to the assessment of liquidated damages.

(d) In addition to providing a schedule update every thirty (30) days, the Contractor, if requested by the Architect or District, shall provide revised schedules within ten (10) days if, at any time, the Architect or District, consider the completion date to be in jeopardy because of "activities behind schedule." The additional schedule shall include a new arrow or precedence diagram and schedule reports conforming to the requirements above, designed to show how the Contractor intends to accomplish the Work to meet the completion date. The form and method employed by the Contractor shall be the same as for the original initial schedule. The Contractor shall modify any portions of the schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed to be behind schedule. If Contractor submits a revised schedule showing an earlier completion date for the Project, Architect's acceptance of this revised schedule shall not entitle Contractor to any delay claim or damages due to any such revised schedule.

3.8.2 Failure to Meet Requirements.

Failure of the Contractor to provide proper schedules as required by this Article and Article 9 is a material breach of the contract and grounds for termination pursuant to Article 14. The District, at its sole discretion, may choose, instead, to withhold, in whole or in part, any progress payments or retention amounts otherwise payable to the Contractor.

3.9 DOCUMENTS AND SAMPLES AT THE SITE

The Contractor shall maintain at the Site for the District one current copy of the Uniform Building Code, Titles 19, 21 and 24 of the California Code of Regulations and one record copy of the Drawings, Specifications, Addenda, Change Orders, and other Modifications, in good order and marked currently to record changes and selections made during construction. In addition, the Contractor shall maintain at the Site approved Shop Drawings, Product Data, Samples, and similar required submittals. These documents shall be available to the Architect and shall be delivered to the Architect for delivery to the District upon completion of the Work.

3.10 SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES

3.10.1 Submittals defined.

3.10.1.1 *Shop Drawings.* The term "shop drawings" as used herein means drawings, diagrams, schedules, and other data, which are prepared by Contractor, Subcontractors, manufacturers, suppliers, or distributors illustrating some portion of the Work, and includes: illustrations; fabrication, erection, layout and setting drawings; manufacturer's standard drawings; schedules; descriptive literature, instructions, catalogs,

and brochures; performance and test data including charts; wiring and control diagrams; and all other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that the materials, equipment, or systems and their position conform to the requirements of the Contract Documents. The Contractor shall obtain and submit with shop drawings all seismic and other calculations and all product data from equipment manufacturers. "Product data" as used herein are illustrations, standard schedules, performance charts, instructions, brochures, diagrams, and other information furnished by the Contractor to illustrate a material, product, or system for some portion of the Work. As used herein, the term "manufactured" applies to standard units usually mass-produced, and "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirements. Shop drawings shall: establish the actual detail of all manufactured or fabricated items, indicate proper relation to adjoining work, amplify design details of mechanical and electrical systems and equipment in proper relation to physical spaces in the structure, and incorporate minor changes of design or construction to suit actual conditions.

3.10.1.2 *Samples.* The term "samples" as used herein are physical examples furnished by Contractor to illustrate materials, equipment, or quality and includes natural materials, fabricated items, equipment, devices, appliances, or parts thereof as called for in the Specifications, and any other samples as may be required by the Architect to determine whether the kind, quality, construction, finish, color, and other characteristics of the materials, etc., proposed by the Contractor conform to the required characteristics of the various parts of the Work. All Work shall be in accordance with the approved samples.

3.10.1.3 *Contractor's Schedule for Submission of Shop Drawings.* Contractor shall obtain and shall submit all required shop drawings, samples, etc., in accordance with Contractor's "Schedule for Submission of Shop Drawings and Samples" as required in the scheduling portion of the General Conditions at Articles 3.8 or the Specifications with such promptness as to cause no delay in its own Work or in that of any other contractor or subcontractor but in no event later than ninety (90) days after the execution of the Contract. No extensions of time will be granted to Contractor or any Subcontractor because of its failure to have shop drawings and samples submitted in accordance with the Schedule. Each Subcontractor shall submit all shop drawings, samples, and manufacturer's descriptive data for the review of the District, the Contractor, and the Architect through the Contractor. By submitting shop drawings, product data, samples, etc., the Contractor represents that it has determined and verified all materials, field measurements, catalog numbers, related field construction criteria, and other relevant data in connection with each such submission, and that it has checked, verified, and coordinated the information contained within such submittals with the requirements of the Work and of the Contract Documents, including the construction schedule. The submission of the shop drawings, product data, samples, etc., shall not deviate from the requirements of the Contract Documents including detailing and design intent which is specifically outlined in Contract Documents except as specifically authorized by the Architect or through an accepted substitution pursuant to Paragraph

3.10.4. All deviations from the Contract Documents shall be narratively described in a transmittal accompanying the shop drawings. However, shop drawings shall not be used as a means of requesting a substitution, the procedure for which is defined in Paragraph 3.10.4, "Substitutions." Review by District and Architect shall not relieve the Contractor or any Subcontractor from its responsibility in preparing and submitting proper shop drawings in accordance with the Contract Documents. Any submission, which in Architect's opinion is incomplete, contains errors, or has been checked superficially will be returned unreviewed by the Architect for resubmission by the Contractor. Contractor shall stamp, sign, and date each submittal indicating its representation that the submittal meets all of the requirements of the Contract Documents and evidence Contractor's review through execution of the following stamp to be placed on each shop drawings:

> "The contractor has reviewed and approved the field dimensions and the construction criteria, and has also made written notation regarding any information in the shop drawings that does not conform to the contract documents. This shop drawing has been coordinated with all other shop drawings received to date by contractor and this duty of coordination has not been delegated to subcontractors, material suppliers, the Architect, or the engineers on this project.
>
> _____
> Signature of Contractor and date"

3.10.1.4 *Extent of Review.* In reviewing shop drawings, the Architect will not verify dimensions and field conditions. The Architect will review and approve shop drawings, product data, samples, etc., for aesthetics and for conformance with the design concept of the Work and the information in the Contract Documents. The Architect's review shall neither be construed as a complete check which relieves the Contractor, Subcontractor, manufacturer, fabricator, or supplier from responsibility for any deficiency that may exist or from any departures or deviations from the requirements of the Contract Documents unless the Contractor has, in writing, called the Architect's attention to the deviations at the time of submission. The Architect's review shall not relieve the Contractor or Subcontractors from responsibility for errors of any sort in shop drawings or schedules, for proper fitting of the Work, coordination of the differing subcontractor trades and shop drawings and Work which is not indicated on the shop drawings at the time of submission of shop drawings. Contractor and Subcontractors shall be solely responsible for any quantities which may be shown on the submittals or Contract Documents.

3.10.2 Drawing Submission Procedure.

3.10.2.1 *Transmittal Letter and Other Requirements.* All shop drawings must be properly identified with the name of the Project and dated, and each lot submitted must be accompanied by a letter of transmittal referring to the name of the Project and to the Specification section number for identification of each item clearly stating in narrative form, as well as "clouding" on the submissions, all qualifications, departures, or deviations from the Contract Documents. Shop drawings, for each section

of the Work shall be numbered consecutively and the numbering system shall be retained throughout all revisions. All Subcontractor submissions shall be made through the Contractor. Each drawing shall have a clear space for the stamps of Architect and Contractor.

3.10.2.2 *Copies Required.* Each submittal shall include one (1) legible, reproducible sepia and five (5) legible prints of each drawing or schedule, table, cut sheet, etc., including fabrication, erection, layout and setting drawings, and such other drawings as required under the various sections of the Specifications, until final acceptance thereof is obtained. Subcontractor shall submit copies, in an amount as requested by the Contractor, of: (1) manufacturers' descriptive data for materials, equipment, and fixtures, including catalog sheets showing dimensions, performance, characteristics, and capacities; (2) wiring diagrams and controls; (3) schedules; (4) all seismic calculations and other calculations; and (5) other pertinent information as required by the District or Architect.

3.10.2.3 *Corrections.* The Contractor shall make all corrections required by Architect and shall resubmit, as required by Architect, corrected copies of shop drawings or new samples until approved. Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the corrections required by the Architect on previous submissions. Professional services required for more than one (1) re-review of required submittals of shop drawings, product data, or samples are subject to charge to the Contractor pursuant to Paragraph 4.4.

3.10.2.4 *Approval Prior to Commencement of Work.* No portion of the Work requiring a shop drawing or sample submission or other submittal shall be commenced until the submission has been reviewed by Contractor and Architect and approved by Architect unless specifically directed in writing by the Architect. All such portions of the Work shall be in accordance with approved shop drawings and samples.

3.10.3 Sample Submissions Procedure.

3.10.3.1 *Samples Required.* In case a considerable range of color, graining, texture, or other characteristics are anticipated in finished products, a sufficient number of samples of the specified materials shall be furnished by the Contractor to indicate the full range of characteristics which will be present in the finished products; and products delivered or erected without submittal and approval of a full range of samples shall be subject to rejection. Except for range samples, and unless otherwise called for in the various sections of the Specifications, samples shall be submitted in duplicate. All samples shall be marked, tagged, or otherwise properly identified with the name of the submitting party, the name of the Project, the purpose for which the samples are submitted and the date, and shall be accompanied by a letter of transmittal containing similar information, together with the Specification section number. Each tag or sticker shall have clear space for the review stamps of Contractor and Architect.

3.10.3.2 *Labels and Instructions.* All samples of materials shall be supplied with the manufacturer's descriptive labels and application instructions.

3.10.3.3 *Architect's Review.* The Architect will review and, if appropriate, approve submissions and will return them to the Contractor with the Architect's stamp and signature applied thereto, indicating the timing for review and appropriate action in compliance with the Architect's (or District's) standard procedures.

3.10.3.4 *Record Drawings and Annotated Specifications.* The Contractor will prepare and maintain on a current basis an accurate and complete set of Record Drawings clearly showing all changes, revisions to specifications and substitutions during construction, including, without limitation, field changes and the final location of all electrical and mechanical equipment, utility lines, ducts, outlets, structural members, walls, partitions, and other significant features, and Annotated Specifications showing clearly all changes, revisions, and substitutions during construction. A hard copy and a pdf copy on a CD of such Record Drawings in Autocad (or most current version required by OPSC) and Annotated Specifications will be delivered to District in accordance with the Contractor's approved construction schedule. In case a specification allows Contractor to elect one of several brands, makes, or types of material or equipment, the annotations shall show which of the allowable items the Contractor has furnished. The Contractor will update the Record Drawings and Annotated Specifications as often as necessary to keep them current, but no less often than weekly. The Record Drawings and Annotated Specifications shall be kept at the Site and available for review and inspection by the District and the Architect. On completion of the Work and prior to Application for Final Payment, the Contractor will provide one complete set of Record Drawings in Autocad (or most current version required by OPSC) and Annotated Specifications to the District, certifying them to be a complete and accurate reflection of the actual construction conditions of the Work.

3.10.3.5 *Equipment Manuals.* Contractor shall obtain and furnish three (3) complete sets of manuals containing the manufacturers' instructions for maintenance and operation of each item of equipment and apparatus furnished under the Contract Documents and any additional data specifically requested under the various sections of the Specifications for each division of the Work. Contractor shall also convert each manual to a pdf file on a CD. The manuals shall be arranged in logical, sequential order, labeled, indexed, and placed in three-ring binders. At the completion of its Work, the Contractor shall certify, by endorsement thereon, that each of the manuals is complete, accurate, and covers all of its Work. Prior to submittal of Contractor's Application for Final Payment, and as a further condition to its approval by the Architect, each Subcontractor shall deliver the manuals, arranged in logical, sequential order, labeled, indexed, endorsed, and placed in three-ring binders, to the Contractor, who shall assemble these manuals for all divisions of the Work, review them for completeness, and submit them to the District through the Architect.

3.10.3.6 *District's Property.* All shop drawings, computer disks, annotated specifications, samples and other submittals shall become the District's property upon receipt by the District or Architect.

3.10.4 Substitutions.

3.10.4.1 *One Product Specified.* Unless the Specifications state that no substitution is permitted, whenever the Contract Documents indicate any specific article, device, equipment, product, material, fixture, patented process, form, method, or type of construction or any specific name, make, trade name, or catalog number, with or without the words "or equal," such specification shall be deemed to be used for the purpose of facilitating description of the material, process, or article desired and shall be deemed to be followed by the words "or equal." Pursuant to Paragraph 3.10.4.3, the Contractor may, unless otherwise stated, offer any material, process, article, etc., which shall be materially equal or better in every respect to that so indicated or specified ("Specified Item") and will completely accomplish the purpose of the Contract Documents.

3.10.4.2 *Products Specified Which are Commercially Unavailable*. If the Contractor fails to make a request for substitutions for products, prior to the submission of its bid, and such products subsequently become commercially unavailable, the Contractor may request a substitution for such commercially unavailable item. The decision to grant this request is solely at the District's discretion. The written approval of the District, consistent with the procedure for Change Orders, shall be required for the use of a proposed substitute material. The District may condition its approval of the substitution upon the delivery to District of an extended warranty or other assurances of adequate performance of the substitution as well as an equitable deduction in the contract price should the substituted item cost less than the Specified Item. All risks of delay due the approval of a requested substitution by the DSA, or any other governmental agency having jurisdiction, shall be on the requesting party. All additional costs, all procurement and construction delays, and all costs for review by the Architect or its consultants shall be the responsibility of the Contractor and will be deducted from Contractor's pay request.

3.10.4.3 *Substitution Request Form*. Requests for substitutions of products, materials, or processes in place of a Specified Item must in writing on the District's Substitution Request Form ("Request Form") at the time of submitting bids to the District, except as provided for in Paragraph 3.10.4.2.

The Request Form must be accompanied by evidence as to whether the proposed substitution:

1. Is equal in quality/service/ability to the Specified Item;
2. Will entail no changes in detail, construction, and scheduling of related work;
3. Will be acceptable in consideration of the required design and artistic effect;
4. Will provide no cost disadvantage to the District;
5. Will require no excessive or more expensive maintenance, including adequacy and availability of replacement parts; and
6. Will required no change of the construction schedule.

In completing the Request Form, the bidder must state, with respect to each requested substitution, whether the bidder will agree to provide the Specified Item in the event that the District denies the bidder's request for such requested substitution. In the event that the bidder has agreed in the Request Form to provide the Specified Item and the District denies the bidder's requested substitution for a Specified Item, the bidder shall provide the Specified Item without any additional cost or charge to the District.

After bids are opened, the apparent lowest bidder shall provide, within five (5) days of opening such bids, any and all Drawing, Specifications, samples, performance data, calculations, and other information, as may be required to assist the Architect and the District in determining whether the proposed substitution is acceptable. The burden of establishing these facts shall be upon the bidder.

After the District's receipt of such evidence by the bidder, the District will make its final decision as to whether the bidder's request for substitution for any Specified Items will be granted. The decision as to whether a proposed request for substitution is equal to a Specified Item shall be at the sole discretion of the District. Any request for substitution that is granted by the District shall be documented and processed though a Change Order. The District may condition its approval of any substitution upon delivery to the District of an extended warranty or other assurances of adequate performance of the substitution. Any and all risks of delay due to approval by the DSA or any other governmental agency having jurisdiction shall be on the bidder.

If the Architect and District accept a proposed substitution, the Contractor agrees to pay for all engineering and design services, including, without limitation, compensation to the Architect and affected engineers for their required time to process such substitution through the Division of the State Architect, if required, and to make all changes and adjustments in materials or the work of all trades directly or indirectly affected by the substituted item or items at no cost to the District.

3.10.4.4 *List of Manufacturers and Products Required*. The Contractor shall require all Subcontractors to prepare and submit to the Contractor, within thirty (30) days of execution of the Subcontract, comprehensive lists, in quadruplicate, of the manufacturers and products proposed for the Project, including information on materials, equipment, and fixtures required by the Contract Documents, as may be required for the Contractor's or Architect's approval. Approval of such lists of products shall not be construed as a substitute for the shop drawings, manufacturer's descriptive data, and samples, required by the Contract Documents, but rather shall be considered as a base from which more detailed submittals shall be developed for final review by the Contractor and the Architect.

3.10.5 Deferred Approvals

Deferred approvals shall be submitted and processed pursuant to the requirements of Division 1 of the Specifications. All deferred approvals shall be prepared by Contractor or Contractor's agent early enough so as to not delay the Project. Contractor is aware that Title 21 California Code of Regulations Section 17(g) and Title 24

California Code of Regulations Section 4-317 have specific requirements for deferred approval as to governing agencies and as to the Architect and Engineer for the Project. As a result, any delay associated with the time for approval by applicable agencies or by the Architect or Architect's consultants shall be Contractor's.

3.11 INTEGRATION OF WORK

3.11.1 Scope.

The Contractor shall be responsible for cutting, fitting, or patching to complete the Work and to make all parts fit together properly. Contractor shall be responsible for ensuring that all trades are coordinated and scheduled so as to ensure the timely and proper execution of the work. When modifying existing work or installing new Work adjacent to existing work, Contractor shall match, as closely as conditions of Site and materials will allow, the finishes, textures, and colors of the original work, refinishing existing work at no additional cost to District. All cost caused by defective or ill-timed work shall be borne by Contractor. Contractor shall be solely responsible for protecting existing work on adjacent properties and shall obtain all required permits for shoring and excavations near property lines.

3.11.2 Structural Members.

New or existing structural members and elements, including reinforcing bars and seismic bracing, shall not be cut, bored, or drilled except by written authority of the Architect. Work done contrary to such authority is at the Contractor's risk and subject to replacement at its own expense without reimbursement under the Contract. Schedule delays resulting from Agency approvals for unauthorized work shall be the Contractor's responsibility.

3.11.3 Subsequent Removal.

Permission to patch any areas or items of the Work shall not constitute a waiver of the District's or the Architect's right to require complete removal and replacement of the areas of items of the Work if, in the opinion of the Architect or the District, the patching does not satisfactorily restore quality and appearance of the Work or does not otherwise conform to the Contract Documents.

3.12 CLEANING UP

3.12.1 Contractor's Responsibility.

Contractor at all times shall keep premises free from debris such as waste, dust, excess water, storm water runoffs, rubbish, and excess materials and equipment. Contractor shall not leave debris under, in, or about the premises, but shall promptly remove same from the premises and dispose of it in a lawful manner. Disposal receipts or dump tickets shall be furnished to the Architect within five (5) days of request. Upon completion of Work, Contractor shall clean interior and exterior of buildings, including

fixtures, equipment, walls, floors, ceilings, roofs, window sills and ledges, horizontal projections, and any areas where debris has collected, so surfaces are free from foreign material or discoloration; Contractor shall clean and polish all glass, plumbing fixtures, equipment, finish hardware and similar finish surfaces. Upon completion of the Work, Contractor shall also remove temporary utilities, fencing, barricades, planking, sanitary facilities and similar temporary facilities from Site.

Contractor shall remove rubbish and debris resulting from the Work on a daily basis. Contractor shall maintain the structures and Site in a clean and orderly condition at all times until acceptance of the project by the District. Contractor shall keep its access driveways and adjacent streets, sidewalks, gutters and drains free of rubbish, debris and excess water by cleaning and removal each day.

3.12.1.1 In addition to the general cleaning, the following special cleaning shall be done at the completion of the work in accordance with the specifications including, but not limited to:

(a) Remove putty stains from glazing, then wash and polish glazing.

(b) Remove marks, stains, fingerprints and other soil or dirt from painted, stained or decorated work.

(c) Remove temporary protection and clean and polish floors and waxed surfaces.

(d) Clean and polish hardware and plumbing trim; remove stains, dust, dirt, plaster and paint.

(e) Remove spots, soil, plaster and paint from tile work, and wash tile.

(f) Clean all fixtures and equipment, remove excess lubrication, clean light fixtures and lamps, polish metal surfaces.

(g) Vacuum-clean carpeted surfaces.

(h) Remove debris from roofs, down spout and drainage system.

3.12.2 Failure to Cleanup.

If the Contractor fails to clean up as provided in the Contract Documents, the District may do so, and the cost thereof shall be the responsibility of the Contractor and deducted from the next progress payment.

3.13 ACCESS TO WORK

The Contractor shall provide the District, the Architect, Engineers and the Inspector of Record, access to the Work in preparation and progress wherever located.

Contractor shall provide safe and proper facilities for such access so that District's representatives may perform their functions.

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES AS ADDRESSED IN ARTICLE 6.

3.14 ROYALTIES AND PATENTS

3.14.1 Payment and indemnity for Infringement.

Contractor shall hold and save the District and its officers, agents, and employees, the Architect, and the Architect's consultants harmless from liability of any nature or kind, including cost and expense, for or on account of any patented or unpatented invention, process, article, or appliance manufactured or used in the performance of the contract, including its use by the District, unless otherwise specifically provided in the contract documents, and unless such liability arises from the sole negligence, or active negligence, or willful misconduct of the District, the Architect, or the Architect's consultants.

3.14.2 Review.

The review by the Architect of any method of construction, invention, appliance, process, article, device, or material of any kind shall be for its adequacy for the Work and shall not be an approval for the use by the Contractor in violation of any patent or other rights of any person or entity.

3.15 INDEMNIFICATION

3.15.1 Contractor.

Contractor shall defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from all liabilities, claims, actions, liens, judgments, demands, damages, losses, costs or expenses of any kind arising from death, personal injury, property damage or other cause based or asserted upon any act, omission, or breach connected with or arising from the progress of Work or performance of service under this Agreement or the Contract Documents. As part of this indemnity, Contractor shall protect and defend, at its own expense, District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from any legal action including attorneys fees or other proceeding based upon such act, omission, breach, or as otherwise required by this Section 3.15.1.

Furthermore, Contractor agrees to and does hereby defend, indemnify and hold harmless District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors from every claim or demand made, and every liability, loss, damage, expense or attorneys fees of any nature whatsoever, which may be incurred by reason of:

(a) Liability for (1) death or bodily injury to persons; (2) damage or injury to, loss (including theft), or loss of use of, any property; (3) any failure or alleged failure to comply with any provision of law or the Contract Documents; or (4) any other loss, damage or expense, sustained by any person, firm or corporation or in connection with the Work called for in this Agreement or the Contract Documents, except for liability resulting from the sole or active negligence, or the willful misconduct of the District.

(b) Any bodily injury to or death of persons or damage to property caused by any act, omission or breach of Contractor or any person, firm or corporation employed by Contractor, either directly or by independent contract, including all damages or injury to, loss (including theft), or loss of use of, any property, sustained by any person, firm or corporation, including District, arising out of or in any way connected with Work covered by this Agreement or the Contract Documents, whether said injury or damage occurs either on or off District property, but not for any loss, injury, death or damages caused by the sole or active negligence or willful misconduct of the District.

(c) Any dispute between Contractor and Contractor's subcontractors/supplies/sureties, including, but not limited to, any failure or alleged failure of the Contractor (or any person hired or employed directly or indirectly by the Contractor) to pay any Subcontractor or Materialman of any tier or any other person employed in connection with the Work and/or filing of any stop notice or mechanic's lien claims.

Contractor, at Contractor's own expense, cost, and risk, shall defend any and all claims, actions, suits, or other proceedings that may be brought or instituted against the District, its officers, agents or employees, on account of or founded upon any cause, damage, or injury identified herein Section 3.15.1, and shall pay or satisfy any judgment that may be rendered against the District, its officers, agents or employees in any action, suit or other proceedings as a result thereof.

Contractor shall ensure that its contract with each of its subcontractors contains provisions requiring the subcontractors to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California to a minimum level as set forth in this Article and consistent with the language of 3.15.1.

The Contractor's and Subcontractors' obligation to defend, indemnify and hold harmless the District, Architect, Inspector, the State of California and their officers, employees, agents and independent contractors hereunder shall include, without limitation, any and all claims, damages, and costs for the following: (1) any damages or injury to or death of any person, and damage or injury to, loss (including theft), or loss of use of, any property; (2) breach of any warranty, express or implied; (3) failure of the Contractor or Subcontractors to comply with any applicable governmental law, rule, regulation, or other requirement; and (4) products installed in or used in connection with the Work.

3.16 SUBMISSION OF DAILY REPORTS

3.16.1 General.

At the close of each working day, the Contractor shall submit a daily report to the Architect and the Inspector, on forms approved by the District, together with applicable delivery tickets, listing all labor, materials, and equipment involved for that day. An attempt shall be made to reconcile the report daily, and it shall be signed by the Architect and the Contractor. In the event of disagreement, pertinent notes shall be entered by each party to explain points which cannot be resolved that day. Each party shall retain a signed copy of the report. Reports by subcontractors or others shall be submitted through the Contractor.

3.16.2 Labor.

The report required by Paragraph 3.16.1 shall show names of workers, classifications, hours worked and hourly rate. Project superintendent expenses are not allowed.

3.16.3 Materials.

The report required by Paragraph 3.16.1 shall describe and list quantities of materials used and unit costs.

3.16.4 Equipment.

The report required by Paragraph 3.16.1 shall show type of equipment, size, identification number, and hours of operation, including loading and transportation, if applicable, and hourly/daily cost. Move-on and move-off fees shall be noted.

3.16.5 Other Services and Expenditures.

Other services and expenditures shall be described in detail as the District requires.

ARTICLE 4

ADMINISTRATION OF THE CONTRACT

4.1 ARCHITECT

4.1.1 Replacement of Architect.

In the case of the termination of the Architect, the District may appoint an architect or another construction professional or may perform such functions with its own licensed professional personnel. The status of the replacement Architect under the Contract Documents shall be the same as that of the former architect.

4.2 ARCHITECT'S ADMINISTRATION OF THE CONTRACT

4.2.1 Status.

Pursuant to Titles 24 and 21 of the California Code of Regulations and as required pursuant to the Field Act, Education Code 17280 et. seq. the Architect will provide administration of the Contract Documents and the Work, and will be the District's representative during construction, as well as during the one (1) year period following the commencement of any warranties. The Architect will have authority to act on behalf of the District only to the extent provided in the Contract Documents.

4.2.2 Site Visits.

The Architect will visit the Site at intervals necessary in the judgment of the Architect to become generally familiar with the progress and quality of the Work and to determine in general if the Work is being performed in accordance with the Contract Documents.

4.2.3 Limitations of Construction Responsibility.

The Architect shall not have control over, charge of, or be responsible for construction means, methods, techniques, schedules, sequences or procedures, fabrication, procurement, shipment, delivery, receipt, installation, or for safety precautions and programs in connection with the Work, since these are solely the Contractor's responsibility under the Contract Documents. The Architect shall not be responsible for the Contractor's, Subcontractors', material or equipment suppliers', or any other person's schedules or failure to carry out the Work in accordance with the Contract Documents. The Architect shall not have control over or charge of acts or omissions of the Contractor, Subcontractors, their agents or employees, or any other persons or entities performing or supplying portions of the Work. The Contractor shall not be relieved of obligations to perform the Work in accordance with the Contract Documents either by activities or duties of the Architect in the Architect's administration of the Contract Documents, or by tests, inspections, or approvals required or performed by persons other than the Contractor.

4.2.4 Communications Facilitating Contract Administration.

Except as otherwise provided in the Contract Documents or when direct communications are warranted by special circumstances, the District and the Contractor shall communicate through the Architect. Where direct communication is necessary between the District and the Contractor, the District's communication shall be through the District's authorized designee. The Architect shall be promptly informed, and shall receive copies of all written communications. Contractor shall not rely upon any communications from the District that is not from the District's authorized designee. Communications by and with the Architect's consultants shall be through the Architect. Communications by and with Subcontractors and material or equipment suppliers shall be through the Contractor.

4.2.5 Payment Applications.

The Architect will review and make recommendations to the District regarding the amounts due the Contractor on the Certificates for Payment pursuant to Article 9 and subject to the Inspector's approval and Architect's observation.

4.2.6 Rejection of Work.

In addition to the rights, duties, and obligations of the Inspector under this Article, the Architect may recommend to the District that the District reject Work which does not conform to the Contract Documents. Whenever the Architect considers it necessary or advisable to achieve the intent of the Contract Documents, the Architect may recommend to the District that the District require additional inspection or testing of the Work in accordance with Paragraph 13.5, whether or not such Work is fabricated, installed, or completed. However, neither this authority of the Architect nor a decision made in good faith either to exercise or not to exercise such authority shall give rise to a duty or responsibility of the Architect to the Contractor, Subcontractors, material and equipment suppliers, their agents or employees, or other persons performing portions of the Work.

4.2.7 Warranties Upon Completion.

The Architect, in conjunction with the Inspector will conduct field reviews of the Work to determine the date of completion, shall receive and forward to the District for the District's review and records written warranties and related documents required by the Contract and assembled by the Contractor, and will issue a final Certificate for Payment when the Architect believes the Work has been completed in compliance with the requirements of the Contract Documents. The handling by the Architect of such warranties, maintenance manuals, or similar documents shall not diminish or transfer to the Architect any responsibilities or liabilities required by the Contract Documents of the Contractor or other entities, parties, or persons performing or supplying the Work.

The Architect will conduct a field review of the Contractor's comprehensive list of items to be completed or corrected (final punch list) and one (1) follow-up field review if required. The cost incurred by the District for further field reviews or the preparation of further punch lists by the Architect shall be invoiced to the Contractor and deducted from the final payment.

4.2.8 Interpretation.

The Architect will interpret and decide matters concerning performance and requirements of the Contract Documents.

4.2.9 Additional Instructions.

4.2.9.1 *Typical Parts and Sections.* Whenever typical parts or sections of the Work are completely detailed on the Drawings, and other parts or sections which are

essentially of the same construction are shown in outline only, the complete details shall apply to the Work which is shown in outline.

4.2.9.2 *Dimensions.* Dimensions of Work shall not be determined by scale or rule. Figured dimensions shall be followed at all times. If figured dimensions are lacking on Drawings, Architect shall supply them on request. The Architect's decisions on matters relating to aesthetic effect will be final.

4.3 INSPECTOR OF RECORD

4.3.1 General.

One or more project inspectors employed by the District and approved by the Division of the State Architect will be assigned to the Work in accordance with the requirements of Title 24 of the California Code of Regulations. The Inspector(s) duties are as specifically defined in Title 24.

4.3.2 Inspector's Duties.

All Work shall be under the observation of the Inspector. The Inspector shall have free access to any or all parts of the Work at any time. The Contractor shall furnish the Inspector such information as may be necessary to keep the Inspector fully informed regarding progress and manner of Work and character of materials. Such observations shall not, in any way, relieve the Contractor from responsibility for full compliance with all terms and conditions of the Contract, or be construed to lessen to any degree the Contractor's responsibility for providing efficient and capable superintendence. The Inspector is not authorized to make changes in the drawings or specifications nor shall the Inspector's approval of the Work and methods relieve the Contractor of responsibility for the correction of subsequently discovered defects, or from its obligation to comply with the Contract Documents.

4.3.3 Inspector's Authority to Reject or Stop Work.

The Inspector shall have the authority to reject Work whenever provisions of the Contract Documents are not being complied with, and Contractor shall instruct its Subcontractors and employees accordingly. In addition, the Inspector may stop any Work that poses a probable risk of harm to persons or property. The Contractor shall instruct its employees, Subcontractors, material and equipment suppliers, etc., accordingly. The absence of any Stop Work order or rejection of any portion of the Work shall not relieve the Contractor from any of its obligations pursuant to the Contract Documents.

4.3.4 Inspector's Facilities.

Within seven (7) days after notice to proceed, the Contractor shall provide the Inspector with the temporary facilities as required under Division 1 of the Specifications.

4.3.5 Testing Times.

The District will provide inspection and testing at its cost during the normal eight (8) hour day Monday through Friday (except holidays). Work by the Contractor outside of the normal eight (8) hour day shall constitute an authorization from the Contractor to the District to provide inspection and testing as required outside of the normal eight (8) hour day. Contractor shall reimburse District for any additional costs associated with inspection and testing (including re-inspection and re-testing) outside the normal eight-hour day and for any retests caused by the Contractor.

4.4 RESPONSIBILITY FOR ADDITIONAL CHARGES INCURRED BY THE DISTRICT FOR PROFESSIONAL SERVICES

If at any time prior to the completion of the requirements under the Contract Documents, the District is required to provide or secure additional professional services for any reason by any act of the Contractor, the Contractor shall be invoiced by the District for any costs incurred for any such additional services, which costs shall be deducted from the next progress payment. Such invoicing shall be independent from any other District remedies and shall not be considered a waiver of any District rights or remedies. If payments then or thereafter due to the Contractor are not sufficient to cover such amounts, the Contractor shall pay the difference to the District. Additional services shall include, but shall not be limited to, the following:

(a) Services made necessary by the default of the Contractor.

(b) Services made necessary due to the defects or deficiencies in the Work of the Contractor.

(c) Services required by failure of the Contractor to perform according to any provision of the Contract Documents.

(d) Services in connection with evaluating substitutions of products, materials, equipment, Subcontractors' proposed by the Contractor, and making subsequent revisions to drawings, specifications, and providing other documentation required (except for the situation where the specified item is no longer manufactured or available).

(e) Services for evaluating and processing claims submitted by the Contractor in connection with the Work outside the established Change Order process.

(f) Services required by the failure of the Contractor to prosecute the Work in a timely manner in compliance within the specified time of completion.

(g) Services in conjunction with the testing, adjusting, balancing and start-up of equipment other than the normal amount customarily associated for the type of Work involved.

(h) Services in conjunction with more than one (1) re-review of submittals of shop drawings, product data, samples, etc.

4.5 DISPUTES

4.5.1 Decision of Architect.

Disputes between District and Contractor involving money or time, including those alleging an error or omission by the Architect, shall be referred initially to the Architect for action as provided in Paragraph 4.5.2. A decision by the Architect, as provided in Paragraph 4.5.5, shall be required as a condition precedent to proceeding with remedies set forth in Paragraph 4.5.6 as to all such matters arising prior to the date final payment is due, regardless of whether such matters relate to execution and progress of the Work, or the extent to which the Work has been completed. The decision by the Architect in response to a Claim shall not be a condition precedent to the remedies under Paragraph 4.5.2 through 4.5.5 in the event: (1) the position of Architect is vacant; (2) the Architect has not received evidence or has failed to render a decision within agreed time limit; (3) the Architect has failed to take action required under Paragraph 4.6.4 within thirty (30) days after the Claim is made, forty-five (45) days have passed after the Claim has been referred to the Architect; or (4) the Claim relates to a Stop Notice Claim not arising from any extra change order or Construction Change Directive for which approval has not been provided.

4.5.2 Architect's Review.

The Architect will review claims and take one or more of the following preliminary actions within ten (10) days of receipt of a claim: (1) request additional supporting data from the claimant; (2) submit a schedule to the parties indicating when the Architect expects to take action; (3) reject the claim in whole or in part, stating reasons for rejection; (4) recommend approval of the claim; or (5) suggest a compromise. The Architect may also, but is not obligated to, notify the surety, if any, of the nature and amount of the claim.

4.5.3 Documentation if Resolved.

If a claim has been resolved, the Architect will prepare or obtain appropriate documentation.

4.5.4 Actions if Not Resolved.

If a claim has not been resolved and all documentation requested pursuant to Paragraph 4.5.2 has been provided, the party making the claim shall, within ten (10) days after the Architect's preliminary response, take one or more of the following actions: (1) modify the initial claim; (2) notify the Architect that the initial claim stands; or (3) supplement with additional supporting data.

4.5.5 Architect's Written Decision.

If a claim has not been resolved after consideration of the foregoing and of other evidence presented by the parties or requested by the Architect, the Architect will notify the parties in writing that the Architect's decision will be made within twenty (20) days. Upon expiration of such time period, the Architect will render to the parties its written decision relative to the claim, including any change in the Contract Sum or Contract Time or both. The Architect may, but is not obligated to, notify the surety and request the surety's assistance in resolving the controversy.

4.5.6 Continuing Contract Performance.

Pending final resolution of a Claim, including, negotiation, mediation, arbitration, or litigation, the Contractor shall proceed diligently with performance of the Contract, and the District shall continue to make any undisputed payments in accordance with the Contract. If the dispute is not resolved, Contractor agrees it will neither rescind the contract nor stop the progress of the work, but Contractor's sole remedy shall be to submit such controversy to determination by a court of competent jurisdiction in the county where the project is located, after the project has been completed, and not before. At the District's sole option, the District may submit individual disputes for binding arbitration and Contractor agrees to the resolution determined for each individual dispute by Arbitrator, including resolution of time and delays. If binding arbitration is utilized for individual disputes, such resolution is full and final as to that particular claim.

4.5.7 Claims for Concealed Trenches or Excavations Greater Than Four Feet Below the Surface.

When any excavation or trenching extends greater than four feet below the surface or if any condition involving hazardous substances are encountered:

(a) Immediately upon discovery, The Contractor shall promptly, and before the following conditions are disturbed, notify the public entity, by telephone and in writing, of the condition except:

1. If such condition is a hazardous waste condition, Contractor's bid includes removal or disposal of hazardous substances. Material that the Contractor believes may be a material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law. In such case, the notice bulletin procedures of Article 7 apply.

2. Subsurface or latent physical conditions at the Site differing from those indicated.

3. Unknown physical conditions at the Site of any unusual nature, different materially from those ordinarily encountered and

generally recognized as inherent in Work of the character provided for in the Contract.

(b) The public entity shall investigate the conditions, and if District finds that the conditions do materially so differ, do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the Work shall issue a change order or construction change directive under the procedures described in the Contract.

(c) In the event that a dispute arises between the public entity or District and the Contractor whether the conditions materially differ, involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Contract, but shall proceed with all Work to be performed under the Contract. The Contractor shall retain any and all rights provided either by Contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

4.5.8 Claims for Extension of Time.

If Contractor and District cannot agree upon an extension of time, whether compensable or not, then Contractor must have first completed the procedures set forth in Paragraph 8.4. Upon completion of the procedures set forth under Paragraph 8.4, Contractor must then comply with the requirements in this Article including those set forth under Paragraph 4.5.9.

4.5.9 Claims Procedures.

4.5.9.1 *Procedure applicable to all Claims:*

(a) Definition of Claim: A "Claim" means a separate demand by the Contractor for (1) time extension, (2) payment of money or damages arising from Work done by or on behalf of the Contractor pursuant to the CONTRACT and payment of which is not otherwise expressly provided for or the claimant is not otherwise entitled to, or (3) and amount the payment of which is disputed by the District.

(b) Filing Claim is Not Basis To Discontinue Work: The Contractor shall promptly comply with Work under the Contract or Work requested by the District even though a written claim has been filed. The Contractor and the District shall make good faith efforts to resolve any and all claims that may arise during the performance of the Work covered by this contract.

(c) Claim Notification: The Contractor shall within seven (7) calendar days after the claim arises, submit a notification, in writing, with the District stating clearly the basis for the claim. If the notification is not submitted within seven (7) days after the claim arises, the Contractor shall be deemed to have waived all

right to assert the claim, and the claim shall be denied. Claims submitted after the final payment date shall also be considered null and void by the District. All claims shall be reviewed pursuant to Paragraph 4.5.1, 4.5.2, and 4.5.5.

(d) Formal Claim Submission: If the Contractor does not concur with the District's decision regarding the Claim Notification, the Contractor will issue a formal Claim Appeal within fourteen (14) days of receipt of the District's decision and all detailed information in support of the Claim Appeal within thirty (30) days. All appeals shall be submitted before final payment. If the Claim Appeal is not submitted within fourteen (14) calendar days and detailed information within thirty (30) days, the Contractor shall be deemed to have waived its right to assert the Claim and the Claim shall be denied. Contractor's failure to submit any detailed information which is in the possession of Contractor shall render such information inadmissible by Contractor at trial or arbitration.

(e) Appeal Claim Format: The Contractor shall provide all written detailed documentation which supports the claim, including but not limited to: arguments, justifications, cost, estimates, schedule analysis and detailed documentation. The format of the Claim Appeal shall be as follows:

(1) Cover letter.

(2) Summary of factual basis of claim and amount of claim.

(3) Summary of the basis of the claim, including the specific clause and section under the Contract under which the claim is made.

(4) Documents relating to the claim, including:

a. Specifications
b. Drawings
c. Clarifications (RFI's)
d. Other relevant information
e. Analysis of claim merit.
f. Analysis of claim cost.
g. For claims relating to time extensions, an analysis and supporting documentation evidencing any effect upon the critical path.
h. Certification.
i. Chronology of events and related correspondence.
j. Daily reports and logs.

(f) Certification: The Contractor (and subcontractors, if applicable) shall submit with the claim a certification under penalty of perjury:

(1) That the Contractor has reviewed the claim and that such claim is made in good faith;

(2) Supporting data are accurate and complete to the best of the Contractor's knowledge and belief;

(3) The amount requested accurately reflects the amount of compensation for which the Contractor believes the District is liable.

(4) That the Contractor is familiar with Government Code Sections 12650 et seq. and Penal Code Section 72 and that false claims can lead to substantial fines and/or imprisonment.

(g) Signature of Certification: If the Contractor is not an individual, the certification shall be executed by an officer or general partner of the Contractor having overall responsibility for the conduct of the Contractor's affairs.

(h) Mandatory Claim Appeal Procedure: The Contractor's Claim Appeal shall be denied if it fails to provide the written basis of the claim and certification as set forth herein.

(i) District May Request Additional Information: Within thirty (30) days of receipt of the Claim Appeal and the information under this Article, the District may request in writing any additional documentation supporting the claim or documentation relating to defenses to the claim which the District may assert.

4.5.9.2 *Claims Procedures in Addition to Government Code Claim*. Nothing in the claims procedures set forth in this Article 4 of the General Conditions shall act to waive or relieve the Contractor from meeting the requirements set forth in Government code Section 900 et seq.

4.5.9.3 *Binding Arbitration of Individual Claim Issues.* At the District's sole option, the District may submit individual disputes, or claims, to binding arbitration and Contractor agrees to the resolution determined for each individual dispute by Arbitrator, including resolution of time and delays. If binding arbitration is utilized, such resolution is a full and final resolution of the particular claim or dispute. Under no circumstances may the Contractor stop work, rescind its contract or otherwise slow the progress of Work during resolution of individual claims in binding Arbitration.

4.5.9.4 *Resolution of Disputes in Court of Competent Jurisdiction.* If claims are not resolved under the procedure set forth and pursuant to Article 4.5.9.2, such claim or controversy shall be submitted to a court in the county of competent jurisdiction after the Project has been completed, and not before. Prior to the filing of any such action in accordance with this Paragraph, the Contractor shall comply with the requirements set forth in Government Code Section 900 et seq.

4.5.9.5 *Warranties, Guarantees and Obligations.* The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto, and, in particular but without limitation, the warranties, guarantees and

obligations imposed upon Contractor by the General Conditions and amendments thereto; and all of the rights and remedies available to District and Architect thereunder, are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by laws or regulations by special warranty or guarantee or by other provisions of the Contract Documents, and the provisions of this Paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right and remedy to which they apply.

ARTICLE 5

SUBCONTRACTORS

5.1 DEFINITIONS

5.1.1 Subcontractual Relations

By appropriate agreement, written where legally required for validity, the Contractor shall require each Subcontractor, to the extent of the Work to be performed by the Subcontractor, to be bound to the Contractor by terms of the Contract Documents, and to assume toward the Contractor all the same obligations and responsibilities, assumed by Contractor pursuant to the Contract Documents. Each subcontract agreement shall preserve and protect the rights of the District and the Architect under the Contract Documents with respect to the Work to be performed by the Subcontractor so that subcontracting thereof will not prejudice such rights. Where appropriate, the Contractor shall require each Subcontractor to enter into similar agreements with Sub-subcontractors. The Contractor shall make available to each proposed Subcontractor, prior to the execution of the subcontract agreement, copies of the Contract Documents to which the Subcontractor will be bound. Upon written request of the Subcontractor, the Contractor shall identify to the Subcontractor the terms and conditions of the proposed subcontract agreement, which may be at variance with the Contract Documents. Subcontractors shall similarly make copies of applicable portions of such documents available to their respective proposed Sub-subcontractors.

5.1.2 Subcontractor Licenses.

All subcontractors shall be properly licensed by the California State Licensing Board at the time bids are opened by the District.

5.1.3 Substitution of Subcontractor

Substitution of Subcontractors shall be permitted only as authorized under Public Contract Code §§ 4107 et. seq. Any substitutions of Subcontractors shall not result in any increase in the Contract Price or result in the granting of any extension of time for the completion of the Project.

5.1.4 Contingent Assignment of Subcontracts and Other Contracts

Each subcontract and other contract or agreement for any portion of the Work is hereby assigned by the Contractor to the District provided that:

(a) Such assignment is effective only after termination of this contract with the Contractor by the District as provided herein and only for those subcontracts and other contracts and agreements that the District accepts by notifying the Subcontractor or Materialman (as may be applicable) in writing; and

(b) Such assignment is subject to the prior rights of the Surety(ies) obligated under the Payment Bond and Performance Bond.

The Contractor shall include adequate provisions for this contingent assignment of subcontracts and other contracts and agreements in each such document.

ARTICLE 6

CONSTRUCTION BY DISTRICT OR BY SEPARATE CONTRACTORS

6.1 DISTRICT'S RIGHT TO PERFORM CONSTRUCTION AND TO AWARD SEPARATE CONTRACTS

6.1.1 Separate Contracts.

(a) District reserves the right to let other contracts in connection with this Work. Contractor shall afford other contractors reasonable opportunity for (1) introduction and storage of their materials; (2) access to the Work; and (3) execution of their work. Contractor shall properly connect and coordinate its work with that of other Contractors.

(b) If any part of Contractor's Work depends on proper execution or results of any other contractor, the Contractor shall inspect and within seven (7) days or less, report to Architect, in writing, any defects in such work that render it unsuitable for proper execution of Contractor's work. Contractor will be held accountable for damages to District for that work which it failed to inspect or should have inspected. Contractor's failure to inspect and report shall constitute its acceptance of other contractors' work as fit and proper for reception of its work, except as to defects which may develop in other contractors' work after execution of Contractor's work.

(c) To ensure proper execution of its subsequent Work, Contractor shall measure and inspect Work already in place and shall at once report to the Architect in writing any discrepancy between executed Work as built and the Contract Documents.

(d) Contractor shall ascertain to its own satisfaction the scope of the Project and nature of any other contracts that have been or may be awarded by District in

prosecution of the Project and the potential impact of such work on Contractor's schedule.

(e) Nothing herein contained shall be interpreted as granting to Contractor the exclusive occupancy at the site of Project. Contractor shall not cause any unnecessary hindrance or delay to any other contractor working on the Project Site. If execution of any contract by the District is likely to cause interference with Contractor's performance of its contract, District shall decide which contractor shall cease work temporarily and which contractor shall continue, or whether work can be coordinated so that contractors may proceed simultaneously.

(f) District shall not be responsible for any damages suffered or extra costs incurred by Contractor resulting directly or indirectly from award or performance or attempted performance of any other contract or contracts at the Project, or caused by any decision or omission of District respecting the order of precedence in performance of contracts.

CONTRACTOR IS AWARE THAT THIS CONTRACT MAY BE SPLIT INTO SEVERAL PHASES. IF THE CONTRACT IS SPLIT INTO PHASES THEN CONTRACTOR HAS MADE ALLOWANCE FOR ANY DELAYS OR DAMAGES WHICH MAY ARISE FROM COORDINATION WITH CONTRACTORS FOR OTHER PHASES. IF ANY DELAYS SHOULD ARISE FROM ANOTHER CONTRACTOR WORKING ON A DIFFERENT PHASE, CONTRACTOR'S SOLE REMEDY FOR DAMAGES, INCLUDING DELAY DAMAGES, SHALL BE AGAINST THE CONTRACTOR WHO CAUSED SUCH DAMAGE AND NOT THE DISTRICT. CONTRACTOR SHALL PROVIDE ACCESS TO OTHER CONTRACTORS FOR OTHER PHASES AS NECESSARY TO PREVENT DELAYS AND DAMAGES TO OTHER CONTRACTORS WORKING ON OTHER PHASES OF CONSTRUCTION.

6.1.2 District's Right to Carry Out the Work.

See Paragraph 2.2.

6.1.3 Designation as Contractor.

When separate contracts are awarded to contractors on the Project Site, the term "Contractor" in the Contract Documents in each case shall mean the Contractor who executes each separate District/Contractor Agreement.

6.1.4 Contractor Duties.

The Contractor shall have overall responsibility to reasonably coordinate and schedule Contractor's activities with the activities of the District's own forces and of

each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the District in reviewing their construction schedules when directed to do so. The Contractor shall make any revisions to the construction schedule and Contract Sum deemed necessary after a joint review and mutual agreement. The construction schedules shall then constitute the schedules to be used by the Contractor, separate contractors, and the District until subsequently revised. Additionally, Contractor shall coordinate with Architect and District inspector to ensure timely and proper progress of work.

6.2 CONSTRUCTIVE OWNERSHIP OF PROJECT SITE AND MATERIAL

Upon commencement of Work, the Contractor becomes the constructive owner of the entire site, improvements, material and equipment on Project site. Contractor must ensure proper safety and storage of all materials and assumes responsibility as if Contractor was the owner of the Project site. All risk of loss or damage shall be borne by Contractor during the Work until the date of Completion. As construction owner, Contractor must carry adequate insurance in case of calamity and is not entitled to rely on the insurance requirements as set forth in this agreement as being adequate coverage in case of calamity.

6.3 DISTRICT'S RIGHT TO CLEAN UP

If a dispute arises among the Contractor, separate contractors, and the District as to the responsibility under their respective contracts for maintaining the premises and surrounding area free from waste materials and rubbish as described in Paragraph 3.12, the District may clean up and allocate the cost among those it deems responsible.

ARTICLE 7

CHANGES IN THE WORK

7.1 CHANGES

7.1.1 No Changes Without Authorization.

There shall be no change whatsoever in the drawings, specifications, or in the Work without an executed Change Order, Construction Change Directive, or order by the Architect for a minor change in the Work as herein provided. District shall not be liable for the cost of any extra work or any substitutions, changes, additions, omissions, or deviations from the Drawings and Specifications unless the District's Governing Board has authorized the same and the cost thereof approved in writing by Change Order or executed Construction Change Directive. No extension of time for performance of the Work shall be allowed hereunder unless claim for such extension is made at the time changes in the Work are ordered, and such time duly adjusted in writing in the Change Order. The provisions of the Contract Documents shall apply to all such changes, additions, and omissions with the same effect as if originally embodied in the Drawings and Specifications. Notwithstanding anything to the contrary in this Article 7, all Change

Orders shall be prepared and issued by the Architect and shall become effective when executed by the District's Governing Board, the Architect, the Contractor, and the DSA.

Should any Change Order result in an increase in the Contract price, the cost of such Change Order shall be agreed to, in writing, in advance by Contractor and District and be subject to the monetary limitations set forth in Public Contract Code Section 20118.4. In the event that Contractor proceeds with any change in Work without first notifying District and obtaining the Architect's and District's consent to a Change Order, Contractor waives any claim of additional compensation for such additional work.

CONTRACTOR UNDERSTANDS, ACKNOWLEDGES, AND AGREES THAT THE REASON FOR THIS NOTICE REQUIREMENT IS SO THAT DISTRICT MAY HAVE AN OPPORTUNITY TO ANALYZE THE WORK AND DECIDE WHETHER THE DISTRICT SHALL PROCEED WITH THE CHANGE ORDER OR ALTER THE PROJECT SO THAT SUCH CHANGE IN WORK BECOMES UNNECESSARY.

7.1.2 Architect Authority.

The Architect will have authority to order minor changes in the Work not involving any adjustment in the Contract Sum, or an extension of the Contract Time, or when a change which is inconsistent with the intent of the Contract Documents. Such changes shall be effected by written Change Order and shall be binding on the District and the Contractor. The Contractor shall carry out such written orders promptly.

7.2 CHANGE ORDERS ("CO")

A CO is a written instrument prepared by the Architect and signed by the District(as authorized by the District's Governing Board), the Contractor, the Architect, and the DSA (if necessary), stating their agreement upon all of the following:

(a) A description of a change in the Work;

(b) The amount of the adjustment in the Contract Sum, if any; and

(c) The extent of the adjustment in the Contract Time, if any.

7.3 CONSTRUCTION CHANGE DIRECTIVE

7.3.1 Definition.

A Construction Change Directive is a written order prepared by the Architect and signed by the District and the Architect, directing a change in the Work and stating a proposed basis for adjustment, if any, in the Contract Sum or Contract Time, or both. The District may by Construction Change Directive, without invalidating the Contract, order changes in the Work within the general scope of the Contract consisting of additions, deletions, or other revisions within. If applicable, the Contract Sum and Contract Time will be adjusted accordingly. In the case of a Construction Change Directive being

issued, Contractor must commence Work immediately or delays from failure to perform Construction Change Directive shall be the responsibility of Contractor. Any dispute as to the sum of Construction Change Directive or timing of payment, shall be resolved pursuant to Paragraph 4.5.

7.3.2 Use to Direct Change

A Construction Change Directive shall be used in the absence of agreement on the terms of a CO. A copy of a proposed form is provided at the end of this Article.

7.4 REQUEST FOR INFORMATION ("RFI")

7.4.1 Definition.

An RFI is a written request prepared by the Contractor requesting the Architect to provide additional information necessary to clarify or amplify an item which the Contractor believes is not clearly shown or called for in the drawings or specifications, or to address problems which have arisen under field conditions.

7.4.2 Scope.

The RFI shall reference all the applicable Contract Documents including specification section, detail, page numbers, drawing numbers, and sheet numbers, etc. The Contractor shall make suggestions and interpretations of the issue raised by the RFI. An RFI cannot modify the Contract Cost, Contract Time, or the Contract Documents.

7.4.3 Response Time.

The Architect must respond to a RFI within a reasonable time after receiving such request. If the Architect's response results in a change in the Work, then such change shall be effected by a written CO or Construction Change Directive, if appropriate. If the Architect cannot respond to the RFI within a reasonable time, the Architect shall notify the Contractor, with a copy to the Inspector and the District, of the amount of time that will be required to respond.

7.4.4 Costs Incurred.

The Contractor shall be responsible for any costs incurred for professional services, which shall be deducted from the next progress payment, if an RFI requests an interpretation or decision of a matter where the information sought is equally available to the party making such request. District, at its sole discretion, shall invoice Contractor for all such professional services arising from this Article.

7.5 REQUEST FOR PROPOSAL ("RFP")

7.5.1 Definition.

An RFP is a written request prepared by the Architect requesting the Contractor to submit to the District and the Architect an estimate of the effect of a proposed change on the Contract Price and the Contract Time.

7.5.2 Scope.

An RFP shall contain adequate information, including any necessary drawings and specifications, to enable Contractor to provide the cost breakdowns required by Paragraph 7.7. The Contractor shall not be entitled to any Additional Compensation for preparing a response to an RFP, whether ultimately accepted or not.

7.6 CHANGE ORDER REQUEST ("COR")

7.6.1 Definition.

A COR is a written request prepared by the Contractor requesting that the District and the Architect issue a CO based upon a proposed change called for in an RFP or a claim pursuant to Paragraph 4.5.

7.6.2 Changes in Price.

A COR shall include breakdowns per Paragraph 7.7 to validate any change in Contract Price due to proposed change or claim.

7.6.3 Changes in Time.

A COR shall also include any additional time required to complete the Project. Any additional time requested shall not be the number of days to make the proposed change, but must be based upon the impact to the Project Schedule as defined in Paragraph 3.8 of the General Contract. Any changes in time will be granted only if there is an impact to the critical path. If contractor fails to request a time extension in a COR, then the Contractor is thereafter precluded from requesting or claiming a delay.

7.7 COST OF CHANGE ORDERS

7.7.1 Scope.

Within ten (10) days after a request is made for a change that impacts the Contract Sum as defined in Paragraph 9.1, the critical path, or the Contract Time as defined in Paragraph 8.4.2, the Contractor shall provide the District and the Architect, with a written estimate of the effect of the proposed CO upon the Contract Sum and the actual cost of construction, which shall include a complete itemized cost breakdown of all labor and material showing actual quantities, hours, unit prices, and wage rates required for the change, and the effect upon the Contract Time of such CO. Changes may be made by

District by an appropriate written CO, or, at the District's option, such changes shall be implemented immediately upon the Contractor's receipt of an appropriate written Construction Change Directive.

District may, as provided by law and without affecting the validity of this Agreement, order changes, modification, deletions and extra work by issuance of written CO or Construction Change Directives from time to time during the progress of the Project, contract sum being adjusted accordingly. All such work shall be executed under conditions of the original Agreement except that any extension of time caused thereby shall be adjusted at time of ordering such change. District has discretion to order changes on a "time and material" basis with adjustments to time made after Contractor has justified through documentation the impact on the critical path of the Project.

7.7.2 Determination of Cost.

The amount of the increase or decrease in the Contract Price from a CO, if any, shall be determined in one or more of the following ways as applicable to a specific situation:

(a) Mutual acceptance of a lump sum properly itemized and supported by sufficient substantiating data to permit evaluation. If an agreement cannot be reached within fifteen (15) days after submission and negotiation of Contractor's proposal, Contractor may submit pursuant to Paragraph 7.7.3. Submission of sums which have no basis in fact are at the sole risk of Contractor and may be a violation of the False Claims Act set forth under Government Code Section 12650 et. seq.);

(b) By unit prices contained in Contractor's original bid and incorporated in the Project documents or fixed by subsequent agreement between District and Contractor;

(c) Cost to be determined in a manner agreed upon by the parties and a mutually acceptable fixed or percentage fee. However, in the case of disagreement, Contractor must utilize the procedure under section 7.7.3; or

(d) By cost of material and labor and percentage of overhead and profit. If the value is determined by this method the following requirements shall apply:

1. **Basis for Establishing Costs.**

a. Labor will be the actual cost for wages prevailing locally for each craft or type of workers at the time the extra Work is done, plus employer payments of payroll taxes and insurance, health and welfare, pension, vacation, apprenticeship funds, and other direct costs resulting from Federal, State, or local laws, as well as assessments or benefits required by lawful collective bargaining agreements. The use of a labor classification which would increase the extra Work cost will not be

permitted unless the Contractor establishes the necessity for such additional costs. Labor costs for equipment operators and helpers shall be reported only when such costs are not included in the invoice for equipment rental.

b. Materials shall be at invoice or lowest current price at which such materials are locally available and delivered to the Site in the quantities involved, plus sales tax, freight, and delivery.

The District reserves the right to approve materials and sources of supply or to supply materials to the Contractor if necessary for the progress of the Work. No markup shall be applied to any material provided by the District.

c. Tool and Equipment Rental. No payment will be made for the use of tools which have a replacement value of $250 or less.

Regardless of ownership, the rates to be used in determining equipment rental costs shall not exceed listed rates prevailing locally at equipment rental agencies or distributors at the time the Work is performed.

The rental rates paid shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Necessary loading and transportation costs for equipment used on the extra Work shall be included. If equipment is used intermittently and, when not in use, could be returned to its rental source at less expense to the District than holding it at the Work Site, it shall be returned unless the Contractor elects to keep it at the Work Site at no expense to the District.

All equipment shall be acceptable to the Inspector, in good working condition, and suitable for the purpose for which it is to be used. Manufacturer's ratings and modifications shall be used to classify equipment, and equipment shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

d. Other Items. The District may authorize other items which may be required on the extra work. Such items include labor, services, material, and equipment which are different in their nature from those required by the Work, and which are of a type not ordinarily available from the Contractor or any of the Subcontractors. Invoices covering all such items in detail shall be submitted with the request for payment.

e. Invoices. Vendors' invoices for material, equipment rental, and other expenditures shall be submitted with the COR. If the request for payment is not substantiated by invoices or other documentation, the District may establish the cost of the item involved at the lowest price which was current at the time of the Daily Report.

f. Overhead. Overhead, including direct and indirect costs, shall be submitted with the COR and include: home office overhead, off-site supervision, CO preparation/negotiation/research, time delays, project interference and disruption, additional guaranty and warranty durations, on-site supervision, additional temporary protection, additional temporary utilities, additional material handling costs, and additional safety equipment costs.

7.7.3 Format for Proposed Cost Change.

The following format shall be used as applicable by the District and the Contractor to communicate proposed additions and deductions to the Contract. A copy of a proposed Construction Change Directive form is provided at the end of this Article.

		EXTRA	CREDIT
(a)	Material (attach itemized quantity and unit cost plus sales tax)	_____	_____
(b)	Labor (attach itemized hours and rates)	_____	_____
(c)	Equipment (attach invoices)	_____	_____
(d)	Subtotal	_____	_____
(e)	If Subcontractor performed Work, add Subcontractor's overhead and profit to portions performed by Sub-contractor, not to exceed fifteen percent (15%) of item (d).	_____	_____

		EXTRA	CREDIT
(f)	Liability and Property Damage Insurance, Worker's, Compensation Insurance, Social Security, and Unemployment Taxes, not to exceed as follows: FICA @ **6.2%**- with a wage ceiling of $84,900; Medicare @ **1.45%**- no wage ceiling; FUTA @ **.8%**- with a wage ceiling of $7,000; ETT and SUI @ **2.3%**- with a wage ceiling of $7,000; Workers' Compensation @ **5.94%**; Liability and Property Damage @ **2.5%**. **Total not-to-exceed is 19.19%.** (*Note: Modifications to these percentages will be evaluated and possibly modified only on a case-by-case basis and only after proper proof of alternate percentages are documented and approved in advance. In addition, as wage ceilings are met, those corresponding percentages must drop from the "burden" calculations).*	_____	_____
(g)	Subtotal	_____	_____
(h)	General Contractor's Overhead and Profit: Not to exceed fifteen percent (15%) of Item (g) if Contractor performed the work. No more than five percent (5%) of Item (g) if Subcontractor performed the work. If work was performed by Contractor and Subcontractors, portions performed by Contractor shall not exceed fifteen percent (15%) if Item (g), and portions performed by Subcontractor shall not exceed five percent (5%) of Item (g)	_____	_____
(i)	Subtotal	_____	_____
(j)	Bond not to exceed one percent (1%) of Item (g)	_____	_____
(k)	TOTAL	_____	_____
(l)	Time	_____	_____

The undersigned Contractor approves the foregoing Change Order or Construction Change Directive as to the changes, if any, and the contract price specified for each item and as to the extension of time allowed, if any, for completion of the entire work on account of said Change Order or Construction Change Directive, and agrees to furnish all labor, materials and service and perform all work necessary to complete any additional work specified therein, for the consideration stated herein. It is understood

that said Change Order or Construction Change Directive shall be effective when approved by the Governing Board of the District.

It is expressly understood that the value of such extra Work or changes, as determined by any of the aforementioned methods, expressly includes any and all of the Contractor's costs and expenses, both direct and indirect, resulting from additional time required on the Project or resulting from delay to the Project. Any costs, expenses, damages or time extensions not included are deemed waived.

The Contractor expressly acknowledges and agrees that any change in the Work performed shall not be deemed to constitute a delay or other basis for claiming additional compensation based on theories including, but not limited to, acceleration, suspension or disruption to the Project.

7.7.4 Deductive Change Orders

All deductive Change Order(s) must be prepared pursuant to Paragraph 7.7.3. Contractor will be allowed a maximum of 5% total profit and overhead. If subcontractor work is involved, subcontractors shall be entitled to a maximum of 5% profit and overhead on the deducted work. Any deviation from this Article shall not be allowed.

7.7.5 Discounts, Rebates, and Refunds.

For purposes of determining the cost, if any, of any change, addition, or omission to the Work hereunder, all trade discounts, rebates, refunds, and all returns from the sale of surplus materials and equipment shall accrue and be credited to the Contractor, and the Contractor shall make provisions so that such discounts, rebates, refunds, and returns may be secured, and the amount thereof shall be allowed as a reduction of the Contractor's cost in determining the actual cost of construction for purposes of any change, addition, or omissions in the Work as provided herein.

7.7.6 Accounting Records.

With respect to portions of the Work performed by COs and Construction Change Directives on a time-and-materials, unit-cost, or similar basis, the Contractor shall keep and maintain cost-accounting records satisfactory to the District, which shall be available to the District on the same terms as any other books and records the Contractor is required to maintain under the Contract Documents.

7.7.7 Notice Required.

If the Contractor desires to make a claim for an increase in the Contract Price, or any extension in the Contract Time for completion, it shall notify the District pursuant to Paragraph 4.5 and this Article. No claim shall be considered unless made in accordance with this subparagraph. Contractor shall proceed to execute the Work even though the adjustment may not have been agreed upon. Any change in the Contract Price or extension of the Contract Time resulting from such claim shall be authorized by a CO.

7.7.8 Applicability to Subcontractors.

Any requirements under this Article 7 shall be equally applicable to COs or Construction Change Directives issued to Subcontractors by the Contractor to the same extent required by the Contractor.

7.7.9 Alteration to Change Order Language.

Contractor shall not alter or reserve time in Change Orders or Construction Change Directives. Contractor shall execute finalized Change Orders and proceed under Paragraph 7.7.7 and Paragraph 4.5 with proper notice. If Contractor intends to reserve time, without an approved CPM schedule prepared pursuant to Paragraph 3.8 then Contractor may be prosecuted pursuant to the False Claim Act.

CONSTRUCTION CHANGE DIRECTIVE NO. _____

PROJECT: _____

TO: _____

You are hereby directed to provide the extra work necessary to comply with this Construction Change Directive.

DESCRIPTION OF CHANGE: _____

_____

NOTE:

Contractor agrees to furnish all labor and materials and perform all of the above-described work in accordance with the above terms in compliance with the applicable sections of the Contract documents. The amount of the charges under this Construction Change Directive is limited to the charges allowed under Article 7 of the General Conditions. The adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this Construction Change Directive shall constitute the entire compensation and/or adjustment in the contract time and contract sum due to the Contractor arising out of the change in the work covered by this Construction Change Directive, unless otherwise provided in this Construction Change Directive.

CHANGE ORDER NO. _____

PROJECT: _____

TO: _____

You are hereby directed to provide the extra work necessary to comply with this Change Order.

DESCRIPTION OF CHANGE: _____

_____

COST (This cost shall not be exceeded): _____

Original Contract Price: $_____

Change Order Amount: $_____

New Contract Price: $_____

TIME FOR COMPLETION: _____

Original Completion Date:_____

Time for Completion of CO:_____

New Completion Date:_____

NOTE:

Contractor agrees to furnish all labor and materials and perform all of the above-described work in accordance with the above terms in compliance with the applicable sections of the Contract documents. The amount of the charges under this Change Order is limited to the charges allowed under Article 7 of the General Conditions. The adjustment in the contract sum, if any, and the adjustment in the contract time, if any, set out in this Change Order shall constitute the entire compensation and/or adjustment in the contract time and contract sum due to the Contractor arising out of the change in the work covered by this Change Order, unless otherwise provided in this Change Order. It is understood that this Change Order shall be effective when approved by the Governing Board of the District.

ARTICLE 8

TIME

8.1 DEFINITIONS

8.1.1 Contract Time.

Contractor shall perform and complete all Work under this Contract within the time specified in the Agreement Form. Moreover, Contractor shall perform its Work in strict accordance with any completion schedule, construction schedule or Project milestones developed pursuant to the provisions of the Contract including, but not limited to the Project Schedule set forth in the Specifications.

8.1.2 Notice to Proceed.

District may give a notice to proceed within three (3) months of the award of the bid by District. Once Contractor has received the notice to proceed, Contractor shall complete the Work in the period of time referenced in the Contract Documents.

In the event that District desires to postpone the giving of the notice to proceed beyond this three-month period, it is expressly understood that with reasonable notice to the Contractor, the giving of the date to proceed may be postponed by District. It is further expressly understood by Contractor, that Contractor shall not be entitled to any claim of additional compensation as a result of the postponement of the giving of the notice to proceed.

If the Contractor believes that a postponement will cause a hardship to Contractor, Contractor may terminate the contract with written notice to District within 10 days after receipt by Contractor of District's notice of postponement. It is further understood by Contractor that in the event that Contractor terminates the Contract as a result of postponement by the District, the District shall only be obligated to pay Contractor for the Work that Contractor had performed at the time of notification of postponement. Should Contractor terminate the contract as a result of a notice of postponement, District shall have the authority to award the contract to the next lowest responsible bidder.

8.1.3 Computation of Time.

The term "day" as used in the Contract Documents shall mean calendar day unless otherwise specifically defined.

The Contractor will only be allowed a time extension for unusually severe weather if it results in precipitation or other conditions which in the amount, frequency, or duration is in excess of the norm at the location and time of year in question as established by NOAA weather data. No less than 22 calendar days will be allotted for in the contractor's schedule for each winter weather period which is defined as the months, in aggregate of October, November, December, January, February and March. The

weather days shall be shown on the schedule and if not used will become float for the Project's use. The Contractor will not be allowed a day-for-day weather delay when the contract is bid for construction during a period that normally includes inclement weather. A day-for-day extension will only be allowed for those days in excess of the norm. The Contractor is expected to work seven (7) days per week (if necessary, irrespective of inclement weather), to maintain access, and to protect the Work under construction from the effects of inclement weather.

If the weather is unusually severe in excess of the NOAA data norm and prevents the Contractor from beginning work at the usual daily starting time, or prevents the Contractor from proceeding with seventy-five (75%) of the normal labor and equipment force towards completion of the day's current controlling item on the accepted schedule for a period of at least five hours, and the crew is dismissed as a result thereof, the Architect will designate such time as unavoidable delay and grant one (1) calendar-day extension.

8.2 HOURS OF WORK.

8.2.1 Sufficient Forces.

Contractors and Subcontractors shall continuously furnish sufficient forces to ensure the prosecution of the Work in accordance with the Construction Schedule.

8.2.2 Performance During Working Hours.

Work shall be performed during regular working hours as permitted by the appropriate governmental agency except that in the event of an emergency, or when required to complete the Work in accordance with job progress, Work may be performed outside of regular working hours with the advance written consent of the District and approval of any required governmental agencies.

8.2.3 Costs for After Hours Inspections.

If the Work done after hours is required by the Contract Documents and requires work to be done outside the Inspector's regular working hours, the costs of any after hour inspections, shall be borne by the Contractor. Contractor shall provide the Inspector of Record 24-hour written notice prior to any overtime work being approved.

If the District allows the Contractor to do Work outside regular working hours for the Contractor's convenience, the costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and deducted from the next Progress Payment.

If the Contractor elects to perform Work outside the Inspector's regular working hours, costs of any inspections required outside regular working hours shall be invoiced to the Contractor by the District and deducted from the next Progress Payment.

8.3 PROGRESS AND COMPLETION.

8.3.1 Time of the Essence.

Time limits stated in the Contract Documents are of the essence to the Contract. By executing the Agreement, the Contractor confirms that the Contract Time is a reasonable period for performing the Work.

8.4 EXTENSIONS OF TIME - LIQUIDATED DAMAGES

8.4.1 Liquidated Damages.

Contractor and District hereby agree that the exact amount of damages for failure to complete the Work within the time specified is extremely difficult or impossible to determine. If the Work is not completed within the time specified in the Contract Documents, it is understood that the District will suffer damage. It being impractical and unfeasible to determine the amount of actual damage, it is agreed the Contractor shall pay to District as fixed and liquidated damages, and not as a penalty, **One Hundred Dollars and Zero Cents ($100.00)** for each calendar day of delay in completion. Any liquidated damages recovered by the District shall not, however, limit the District's right to separately recover any actual out-of-pocket damages it suffers due to Contractor's delay. Contractor and his surety shall be liable for the amount thereof pursuant to Government Code section 53069.85.

8.4.2 Excusable Delay.

Contractor shall not be charged for liquidated damages because of any delays in completion of Work which are not the fault or negligence of Contractor or its subcontractors, including acts of God, as defined in Public Contract Code Section 7107, acts of enemy, epidemics and quarantine restrictions. Contractor shall within five (5) calendar days of beginning of any such delay notify District in writing of causes of delay; thereupon District shall ascertain the facts and extent of delay and grant extension of time for completing Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of Work affected by delay, and shall not apply to other portions of Work not so affected. An extension of time may only be granted after proper compliance with Paragraph 3.8 requiring preparation and submission of a properly prepared CPM schedule.

No extended overhead, general conditions costs, impact costs, out-of-sequence costs or any other type of compensation, by any name or characterization, shall be paid to the Contractor for any delay to any activity not designated as a critical path item on the latest approved Project schedule.

The Contractor shall notify the Architect in writing of any anticipated delay and its cause, in order that the Architect may take immediate steps to prevent, if possible, the occurrence or continuance of delay, and may determine whether the delay is to be

considered avoidable or unavoidable, how long it continues, and to what extent the prosecution and completion of the Work might be delayed thereby.

In the event the Contractor requests an extension of Contract time for unavoidable delay, such request shall be submitted in accordance with the provisions in the Contract Documents governing changes in work. When requesting time, i.e., extensions, for proposed Change Orders, they must be submitted with the proposed Change Order with full justification and documentation. If the Contractor fails to submit justification with the proposed Change Order it waives its right to a time extension at a later date. Such justification must be based on the official Contract schedule as updated at the time of occurrence of the delay or execution of Work related to any changes to the scope of work. The justification must include, but is not limited to, the following information:

(a) The duration of the activity relating to the changes in the Work and the resources (manpower, equipment, material, etc.) required to perform these activities within the stated duration.

(b) Logical ties to the official Contract schedule for the proposed changes and/or delay showing the activity/activities in the schedule whose start or completion dates are affected by the change and/or delay. (A fragment of any delay of over ten (10) days must be provided.)

The Contractor and District understand and expressly agree that insofar as Public Contract Code Section 7102 may apply to changes in the Work or delays under this contract, the actual delays and damages, if any, and time extensions are intended to, and shall provide, the exclusive and full method of compensation for changes in the Work and construction delays.

8.4.3 Notice by Contractor Required.

The Contractor shall within five (5) calendar days of beginning of any such delay notify the District in writing of causes of delay with justification and supporting documentation. District will then ascertain the facts and extent of the delay and grant an extension of time for completing the Work when, in its judgment, the findings of fact justify such an extension. Extensions of time shall apply only to that portion of the Work affected by the delay and shall not apply to other portions of the Work not so affected. The sole remedy of Contractor for extensions of time under Paragraph 8.4.2 shall be an extension of the Contract Time at no cost to the District.

Claims relating to time extensions shall be made in accordance with applicable provisions of Article 7.

8.4.4 No Additional Compensation for Delays within Contractor's Control

CONTRACTOR IS AWARE THAT GOVERNMENTAL AGENCIES, SUCH AS THE DEPARTMENT OF GENERAL SERVICES, GAS COMPANIES, ELECTRICAL UTILITY COMPANIES, WATER DISTRICTS AND OTHER

AGENCIES MAY HAVE TO APPROVE CONTRACTOR PREPARED DRAWINGS OR APPROVE A PROPOSED INSTALLATION. CONTRACTOR HAS INCLUDED DELAYS AND DAMAGES WHICH MAY BE CAUSED BY SUCH AGENCIES IN CONTRACTOR'S BID. THUS, CONTRACTOR IS NOT ENTITLED TO MAKE CLAIM UPON THE DISTRICT FOR DAMAGES OR DELAYS ARISING FROM THE DELAYS CAUSED BY SUCH AGENCIES. FURTHERMORE, THE CONTRACTOR HAS SCHEDULED FOR SUCH DELAYS AND IS NOT ENTITLED TO AN EXTENSION OF TIME FOR DELAYS CAUSED BY GOVERNMENTAL AGENCIES WHICH CONTRACTOR MUST OBTAIN APPROVALS FROM AND, THUS, CONTRACTOR IS NOT ENTITLED TO AN EXTENSION OF TIME.

CONTRACTOR SHALL ONLY BE ENTITLED TO COMPENSATION FOR DELAY WHEN THE FOLLOWING CONDITIONS ARE MET: (1) THE DISTRICT IS RESPONSIBLE FOR THE DELAY; (2) THE DELAY IS UNREASONABLE UNDER THE CIRCUMSTANCES INVOLVED; AND (3) THE DELAY WAS NOT WITHIN THE CONTEMPLATION OF DISTRICT AND CONTRACTOR.

ARTICLE 9

PAYMENTS AND COMPLETION

9.1 CONTRACT SUM

The Contract Sum is stated in the Agreement and, including authorized adjustments, is the total amount payable by the District to the Contractor for performance of the Work under the Contract Documents.

9.2 COST BREAKDOWN

9.2.1 Required Information.

On forms or software programs (e.g., Microsoft Project or Primavera) approved by the District, the Contractor shall furnish the following:

(a) Within ten (10) days of the award of the Contract, a detailed breakdown of the Contract Price (hereinafter "Schedule of Values") for each Project or Site;

(b) Within ten (10) days of the award of the Contract, a schedule of estimated monthly payment requests due the Contractor showing the values and construction time of the various portions of the Work to be performed by it and by its Subcontractors or material and equipment suppliers containing such supporting evidence as to its correctness as the District may require;

(c) Within ten (10) days of the award of the Contract, the name, address, telephone number, fax number, California State Contractors License number, classification and monetary value of all Subcontracts for parties furnishing labor, material, or equipment for completion of the Project.

9.2.2 District Approval Required.

The District shall review all submissions received pursuant to Paragraph 9.2.1 in a timely manner. All submissions must be approved by the District before becoming the basis of any payment.

9.3 PROGRESS PAYMENTS

9.3.1 Payments to Contractor.

Within thirty (30) days after approval of the Request for Payment, Contractor shall be paid a sum equal to ninety-five percent (95%) of the value of the Work performed (as certified by Architect and Inspector and verified by Contractor) up to the last day of the previous month, less the aggregate of previous payments. The value of the Work completed shall be the Contractor's best estimate. Work completed as estimated shall be an approximation or estimate only and no mistake, inaccuracy, error or falsification in any approved estimate shall operate to release the Contractor, or any surety upon any bond, from damages arising from such Work, or from the District's enforcement of each and every provision of this Contract including but not limited to the Performance Bond and Payment Bond. The District shall have the right subsequently to correct any mistake, inaccuracy, error or falsification made or otherwise set forth in any approved Request for Payment and such correction may occur in any future Payment Application or in the final payment to the Contractor. No Surety upon any bond shall be relieved, released or exonerated of its obligations under this Contract or any applicable bond when the District is unable to correct an overpayment to the Contractor due to any abandonment by the Contractor or termination by the District.

The Contractor shall not be entitled to have any payment requests processed, or be entitled to have any payment made for work performed, so long as any lawful or proper direction given by the District concerning the Work, or any portion thereof, remains incomplete.

Notwithstanding anything to the contrary stated above, the Contractor may include in its Request for Payment the value of any structural steel, mail order materials, G.F.R.C. panels and other such custom-made materials prepared specifically for the Project and unique to the Project so long as all of the following requirements are satisfied:

(a) The aggregate cost of materials stored off-site shall not exceed Twenty-Five Thousand Dollars ($25,000) at any time without the written approval of the District to be given or withheld in the District's sole discretion;

(b) Title to such materials shall be vested in the District as evidenced by documentation satisfactory in form and substance to the District, including, without limitation, recorded financing statements, UCC filings and UCC searches;

(c) With each Contractor Request for Payment, the Contractor shall submit to the District a written list identifying each location where materials are stored off-site (which must be a bonded warehouse) and the value of the materials at each location. The Contractor shall procure insurance satisfactory to the District (in its reasonable discretion) for materials stored off-site in an amount not less than the total value thereof;

(d) The consent of any Surety shall be obtained to the extent required prior to payment for any materials stored off-site;

(e) Representatives of the District shall have the right to make inspections of the storage areas at any time; and

(f) Such materials shall be (1) protected from diversion, destruction, theft and damage to the reasonable satisfaction of the District; (2) specifically marked for use on the Project; and (3) segregated from other materials at the storage facility.

9.3.2 Purchase of Materials and Equipment.

The Contractor is required to order, obtain, and store materials and equipment sufficiently in advance of its Work at no additional cost or advance payment from District to assure that there will be no delays.

9.3.3 No Waiver.

No payment by District hereunder shall be interpreted so as to imply that District has inspected, approved, or accepted any part of the Work. Notwithstanding any payment, the District may enforce each and every provision of this Contract which includes, but is not limited to, the Performance Bond and Payment Bond. The District may correct any error subsequent to any payment. In no event shall the Contractor or the Surety be released or exonerated from performance under this Contract when the District overpays the contractor based upon any mistake, inaccuracy, error or falsification in any estimate that is included in any Request for Payment.

9.3.4 Issuance of Certificate of Payment.

The Architect shall, within seven (7) days after receipt of the Contractor's Application for Payment, either approve such payment or notify the Contractor in writing of the Architect's reasons for withholding approval in whole or in part as provided in Paragraph 9.6. The review of the Contractor's Application for Payment by the Architect is based on the Architect's observations at the Site and the data comprising the Application for Payment that the Work has progressed to the point indicated and that, to the best of the Architect's knowledge, information, and belief, the quality of the Work is

in accordance with the Contract Documents. The foregoing representations are subject to (1) an evaluation of the Work for conformance with the Contract Documents, (2) results of subsequent tests and inspections, (3) minor deviations from the Contract Documents correctable prior to completion, and (4) specific qualifications expressed by the Architect. The issuance of a Certificate for Payment will further constitute a representation that the Contractor is entitled to payment in the amount certified.

9.4 APPLICATIONS FOR PROGRESS PAYMENTS

9.4.1 Procedure.

9.4.1.1 *Application for Progress.* On or before the fifth (5th) day of each calendar month during the progress of the Work, Contractor shall submit to the Architect an itemized Application for Progress Payment for operations completed in accordance with the Schedule of Values. Such application shall be notarized, if required, and supported by the following or such portion thereof as Architect requires:

(a) The amount paid to the date of the Application to the Contractor, to all its Subcontractors, and all others furnishing labor, material, or equipment for its Contract;

(b) The amount being requested under the Application for Payment by the Contractor on its own behalf and separately stating the amount requested on behalf of each of the Subcontractors and all others furnishing labor, material, and equipment under the Contract;

(c) The balance that will be due to each of such entities after said payment is made;

(d) A certification that the Record Drawings and Annotated Specifications are current;

(e) Itemized breakdown of work done for the purpose of requesting partial payment;

(f) An updated construction schedule in conformance with Paragraph 3.8;

(g) The additions to and subtractions from the Contract Price and Contract Time;

(h) A summary of the retentions held;

(i) Material invoices, evidence of equipment purchases, rentals, and other support and details of cost as the District may require from time to time;

(j) The percentage of completion of the Contractor's Work by line item; and

(k) An updated Schedule of Values from the preceding Application for Payment.

9.4.2 Prerequisites for Progress Payments.

9.4.2.1 *First Payment Request.* The following items, if applicable, must be completed before the first payment request will be accepted for processing:

(a) Installation of the Project sign;

(b) Receipt by Architect of submittals;

(c) Installation of field office;

(d) Installation of temporary facilities and fencing;

(e) Submission of documents listed in the Paragraph 9.2 relating to Cost Breakdown;

(f) Preliminary schedule analysis, due within 10 days after Notice to Proceed;

(g) Contractor's Construction Schedule (Progress Schedule to be CPM based in conformance with Paragraph 3.8);

(h) Schedule of unit prices, if applicable;

(i) Submittal Schedule;

(j) Copies of necessary permits;

(k) Copies of authorizations and licenses from governing authorities;

(l) Initial progress report;

(m) Surveyor qualifications;

(n) Written acceptance of District's survey of rough grading, if applicable;

(o) List of all subcontractors, with names, license numbers, telephone numbers, and scope of work;

(p) All bonds and insurance endorsements; and

(q) Resumes of General Contractor's Project Manager, and if applicable, job site Secretary, Record Documents Recorder, and job site Superintendent.

9.4.2.2 *Second Payment Request*. The second payment request will not be processed until all submittals and shop drawings have been accepted for review by the Architect.

9.4.2.3 *All Payment Requests.* No payment requests will be processed unless Contractor has submitted copies of the Certified Payroll records for the Work which correlates to the payment request and a proper CPM schedule pursuant to Paragraph 3.8 is submitted.

9.4.2.4 Any payments made to Contractor where criteria set forth in Paragraph 9.4.2.1 or 9.4.2.2 have not been met shall not constitute a waiver of said criteria by District. Instead, such payment shall be construed as a good faith effort by District to resolve differences so Contractor may pay its Subcontractors and suppliers and that Contractor agrees that failure to submit such items may constitute a breach of contract by Contractor and may subject Contractor to termination.

9.5 WARRANTY OF TITLE

The Contractor warrants title to all work. The Contractor further warrants that all work is free and clear of liens, claims, security interests, or encumbrances in favor of the Contractor, Subcontractors, material and equipment suppliers, or other persons or entities making a claim by reason of having provided labor, materials, and equipment relating to the Work. Failure to keep work free of liens, claims, security interests or encumbrances is grounds to make a claim against Contractor's payment and performance bond to immediately remedy and defend.

If a lien or stop notice of any nature should at any time be filed against the Work or any District property, by any entity which has supplied material or services at the request of the Contractor, Contractor and Contractor's surety shall promptly, on demand by District and at Contractor's and surety's own expense, take any and all action necessary to cause any such lien or stop notice to be released or discharged immediately therefrom.

If the Contractor fails to furnish to the District within ten (10) calendar days after demand by the District, satisfactory evidence that a lien or stop notice has been so released, discharged, or secured, then District may discharge such indebtedness and deduct the amount required thereof, together with any and all losses, costs, damages, and attorney's fees and expense incurred or suffered by District from any sum payable to Contractor under the Contract.

9.6 DECISIONS TO WITHHOLD PAYMENT

9.6.1 Reasons to Withhold Payment.

The District may withhold payment in whole, or in part, to the extent reasonably necessary to protect the District if, in the District's opinion, the representations to the District required by Paragraph 9.4 cannot be made. The District may withhold payment, in whole, or in part, to such extent as may be necessary to protect the District from loss because of, but not limited to:

(a) Defective Work not remedied;

(b) Stop Notices served upon the District;

(c) Liquidated damages assessed against the Contractor;

(d) The cost of completion of the Contract if there exists reasonable doubt that the Work can be completed for the unpaid balance of any Contract Price or by the completion date;

(e) Damage to the District or other contractor;

(f) Unsatisfactory prosecution of the Work by the Contractor;

(g) Failure to store and properly secure materials;

(h) Failure of the Contractor to submit on a timely basis, proper and sufficient documentation required by the Contract Documents, including, without limitation, acceptable monthly progress schedules, shop drawings, submittal schedules, schedule of values, product data and samples, proposed product lists, executed Change Order, Construction Change Directives, and verified reports;

(i) Failure of the Contractor to maintain record drawings;

(j) Erroneous estimates by the Contractor of the value of the Work performed, or other false statements in an Application for Payment;

(k) Unauthorized deviations from the Contract Documents;

(l) Failure of the Contractor to prosecute the Work in a timely manner in compliance with established progress schedules and completion dates.

(m) Failure to properly pay prevailing wages as defined in Labor Code section 1720, et seq.;

(n) Failure to properly maintain or clean up the Site;

(o) Payments to indemnify, defend, or hold harmless the District;

(p) Any payments due to the District including but not limited to payments for failed tests, or utilities changes or permits;

(q) Failure to submit an acceptable schedule in accordance with Paragraph 3.8; or

(r) Failure to pay Subcontractor or suppliers as required by Paragraph 9.8.1.

(s) Failure to provide release from material suppliers or subcontractors when requested to do so.

9.6.2 Reallocation of Withheld Amounts.

District may, in its discretion, apply any withheld amount to payment of outstanding claims or obligations as defined in Paragraphs 9.6.1 and 9.5. In so doing, District shall make such payments on behalf of Contractor. If any payment is so made by District, then such amount shall be considered as a payment made under Contract by District to Contractor and District shall not be liable to Contractor for such payments made in good faith. Such payments may be made without prior judicial determination of claim or obligation. District will render Contractor an accounting of such funds disbursed on behalf of Contractor.

If Contractor defaults or neglects to carry out the Work in accordance with the contract documents or fails to perform any provision thereof, District may, after ten (10) calendar days written notice to the Contractor and without prejudice to any other remedy make good such deficiencies. The District shall adjust the total Contract price by reducing the amount thereof by the cost of making good such deficiencies. If District deems it inexpedient to correct Work which is damaged, defective, or not done in accordance with Contract provisions, an equitable reduction in the Contract price (of at least 150% of the estimated reasonable value of the nonconforming work) shall be made thereof.

9.6.3 Payment After Cure.

When the grounds for declining approval are removed, payment shall be made for amounts withheld because of them. No interest shall be paid on any retainage or amounts withheld due to the failure of the Contractor to perform in accordance with the terms and conditions of the Contract Documents.

9.7 NONCONFORMING WORK

Contractor shall promptly remove from premises all Work identified by District as failing to conform to the Contract whether incorporated or not. Contractor shall promptly replace and re-execute its own Work to comply with the Contract without additional expense to District and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

If Contractor does not remove such Work which has been identified by District as failing to conform to the Contract Documents within a reasonable time, fixed by written notice, District may remove it and may store the material at Contractor's expense. If Contractor does not pay expenses of such removal within ten (10) calendar days' time thereafter, District may, upon ten (10) calendar days' written notice, sell such materials at auction or at private sale and shall account for net proceeds thereof, after deducting all costs and expenses that should have been borne by Contractor.

9.8 SUBCONTRACTOR PAYMENTS

9.8.1 Payments to Subcontractors.

No later than ten (10) days after receipt, or pursuant to Business and Professions Code Section 7108.5 and Public Contract Code section 7107, the Contractor shall pay to each Subcontractor, out of the amount paid to the Contractor on account of such Subcontractor's portion of the Work, the amount to which said Subcontractor is entitled. The Contractor shall, by appropriate agreement with each Subcontractor, require each Subcontractor to make payments to Sub-subcontractors in a similar manner.

9.8.2 No Obligation of District for Subcontractor Payment.

The District shall have no obligation to pay, or to see to the payment of, money to a Subcontractor except as may otherwise be required by law.

9.8.3 Payment Not Constituting Approval or Acceptance.

An approved Request for Payment, a progress payment, or partial or entire use or occupancy of the Project by the District shall not constitute acceptance of Work not in accordance with the Contract Documents.

9.8.4 Joint Checks.

District shall have the right, if necessary for the protection of the District, to issue joint checks made payable to the Contractor and Subcontractors and material or equipment suppliers. The joint check payees shall be responsible for the allocation and disbursement of funds included as part of any such joint payment. In no event shall any joint check payment be construed to create any contract between the District and a Subcontractor of any tier, any obligation from the District to such Subcontractor, or rights in such Subcontractor against the District.

9.9 COMPLETION OF THE WORK

9.9.1 Close-Out Procedures.

9.9.1.1 *Punch List Items.* When the Contractor considers the Work complete, the Contractor shall prepare and submit to the District a comprehensive list of minor items to be completed or corrected (hereinafter "Punch List"). The Contractor and/or its Subcontractors shall proceed promptly to complete and correct items on the list. Failure to include an item on such list does not alter the responsibility of the Contractor to complete all Work in accordance with the Contract Documents.

Upon receipt of the Contractor's Punch List, and not before, the Architect and Inspector will make an inspection to determine whether the Work, or designated portion thereof, is complete. If the inspection discloses any item, whether or not included on the Contractor's list, is not completed in accordance with the requirements of the Contract Documents, the Contractor shall, before District's issuance of the Notice of Completion,

complete or correct such item. The Contractor shall then submit a request for an additional inspection by the District to determine Completion. When the Work, or designated portion thereof, is complete, the District will file a Notice of Completion. Warranties required by the Contract Documents shall commence on the date of Completion of the Work, or designated portion thereof, unless otherwise provided in the Notice of Completion. The Notice of Completion shall be submitted to the District and the Contractor for their written acceptance of responsibilities assigned to them in such Notice.

9.9.1.2 *Close-Out Requirements.*

(a) Utility Connections. Buildings shall be connected to water, gas, sewer, and electric services, complete and ready for use. Service connections shall be made and existing services reconnected.

(b) Record Drawings.

1. The intent of this procedure is to obtain an exact "as built" record of the Work upon completion of the project. The following information shall be carefully and correctly drawn on the prints and all items shall be accurately located and dimensioned from finished surfaces of building walls on all record drawings.

    a. Any Work not installed as originally indicated on drawings.

    b. The exact location and elevations of all covered utilities, including valves, cleanouts, etc.

2. Contractor is liable and responsible for inaccuracies in as-built drawings, even though they become evident at some future date.

3. Upon completion of the Work and as a condition precedent to approval of final payment, Contractor shall obtain the Inspector's approval of the corrected prints and employ a competent draftsman to transfer the "as-built" information to the most current version of Autocad or as presently being utilized for Plan Check Submission by either the District, OPSC or DSA and print a complete set of transparent sepias. When completed, Contractor shall deliver corrected sepias and Diskette with Autocad file to the District.

(c) Maintenance Manuals. At least thirty (30) days prior to final inspection, three (3) copies of complete operations and maintenance manuals, repair parts lists, service instructions for all electrical and mechanical equipment, and equipment warranties shall be submitted. In addition, Contractor shall submit a pdf version of each manual on a CD. All installation, operating, and maintenance information and drawings shall be bound in 8½" x 11" binders. Provide a table of contents in front and all items shall be indexed with tabs. Each manual shall also

contain a list of subcontractors, with their addresses and the names of persons to contact in cases of emergency. Identifying labels shall provide names of manufactures, their addresses, ratings, and capacities of equipment and machinery. Contractor shall also provide training for District personnel on proper maintenance of each piece of equipment and Contractor shall video-tape each training session, providing a copy of the training video to District.

(d) Inspection Requirements.

1. Before calling for final inspection, Contractor shall determine that the following Work has been performed:

   a. The Work has been completed.
   b. All life safety items are completed and in working order.
   c. Mechanical and electrical Work complete, fixtures in place, connected and ready for tryout and test.
   d. Electrical circuits scheduled in panels and disconnect switches labeled.
   e. Painting and special finishes complete.
   f. Doors complete with hardware, cleaned of protective film relieved of sticking or binding and in working order.
   g. Tops and bottoms of doors sealed.
   h. Floors waxed and polished as specified.
   i. Broken glass replaced and glass cleaned.
   j. Grounds cleared of Contractor's equipment, raked clean of debris, and trash removed from Site.
   k. Work cleaned, free of stains, scratches, and other foreign matter, replacement of damaged and broken material.
   l. Finished and decorative work shall have marks, dirt and superfluous labels removed.
   m. Final cleanup, as in Paragraph 3.12.

2. Furnish a letter to District stating that a responsible representative of District [give name and position] has been instructed in working characteristics of mechanical and electrical equipment.

9.9.2 Costs of Multiple Inspections.

More than two (2) requests of the District to make inspections required under Paragraph 9.9.1 shall be considered an additional service of Architect, and all subsequent costs will be invoiced to Contractor and if funds are available, withheld from remaining payments.

9.10 PARTIAL OCCUPANCY OR USE

9.10.1 District's Rights.

The District may occupy or use any completed or partially completed portion of the Work at any stage. The District and the Contractor shall agree in writing to the responsibilities assigned to each of them for payments, security, maintenance, heat, utilities, damage to the Work, insurance, the period for correction of the Work, and the commencement of warranties required by the Contract Documents. If District and Contractor cannot agree as to responsibilities such disagreement shall be resolved pursuant to Paragraph 4.5.1. When the Contractor considers a portion complete, the Contractor shall prepare and submit a Punch List to the District as provided under Paragraph 9.9.1.

9.10.2 Inspection Prior to Occupancy or Use.

Immediately prior to such partial occupancy or use, the District, the Contractor, and the Architect shall jointly inspect the area to be occupied or portion of the Work to be used in order to determine and record the condition of the Work.

9.10.3 No Waiver.

Unless otherwise agreed upon, partial occupancy or use of a portion or portions of the Work shall not constitute acceptance of the Work not complying with the requirements of the Contract Documents.

9.11 COMPLETION AND FINAL PAYMENT

9.11.1 Final Inspection.

Contractor shall comply with Punch List procedures under Paragraph 9.9.1.1, and maintain the presence of project superintendent and project manager until the punch list is complete to ensure proper and timely completion of the punch list. Under no circumstances shall Contractor demobilize its forces prior to completion of the punch list. Upon receipt of Contractor's written notice that all of the Punch List items have been fully completed and the Work is ready for final inspection and acceptance, Architect shall inspect the Work and shall submit to Contractor and District a final inspection report noting the work, if any, required in order to complete in accordance with the Contract Documents. Absent unusual circumstances, this report shall consist of the Punch List items not yet satisfactorily completed.

Upon completion of the Work contained in the final inspection report, the Contractor shall notify the District and Architect, who shall again inspect such Work. If the Architect and the District finds the Work contained in such final inspection report acceptable under the Contract Documents and, therefore, the Work fully completed, it shall notify Contractor, who shall then submit to the Architect its final Application for Payment.

Upon receipt and approval of such final Application for Payment, the Architect shall issue a final Certificate of Payment stating that to the best of its knowledge, information, and belief, and on the basis of its observations, inspections, and all other data accumulated or received by the Architect in connection with the Work, such Work has been completed in accordance with the Contract Documents. The District shall thereupon inspect such Work and either accept the Work as complete or notify the Architect and the Contractor in writing of reasons why the Work is not complete. Upon acceptance of the Work of the Contractor as fully complete (which, absent unusual circumstances, will occur when the Punch List items have been satisfactorily completed), the District shall record a Notice of Completion with the County Recorder, and the Contractor shall, upon receipt of payment from the District, pay the amounts due Subcontractors.

9.11.2 Retainage.

The retainage, less any amounts disputed by the District or which the District has the right to withhold Pursuant to Paragraph 9.6, shall be paid after approval of the District by the Architect's Certificate of Payment, after the satisfaction of the conditions set forth in Article 9, and after thirty-five (35) days after the acceptance of the Work and recording of the Notice of Completion by District. No interest shall be paid on any retainage, or on any amounts withheld due to a failure of the Contractor to perform, in accordance with the terms and conditions of the Contract Documents, except as provided to the contrary in any Escrow Agreement between the District and the Contractor pursuant to Public Contract Code § 22300.

9.11.3 Procedures for Application for Final Payment.

9.11.3.1 *Prerequisites for Final Payment.* The following conditions must be fulfilled prior to Final Payment:

(a) A full and final waiver or release of all Stop Notices in connection with the Work shall be submitted by Contractor, including a release of Stop Notice in recordable form, together with (to the extent permitted by law) a copy of the full and final release of all Stop Notice rights.

(b) The Contractor shall have made all corrections to the Work which are required to remedy any defects therein, to obtain compliance with the Contract Documents or any requirements of applicable codes and ordinances, or to fulfill any of the orders or directions of District required under the Contract Documents.

(c) Each Subcontractor shall have delivered to the Contractor all written guarantees, warranties, applications, and bonds required by the Contract Documents for its portion of the Work.

(d) Contractor must have completed all requirements set forth in Paragraph 9.9.1.2.

(e) Architect shall have issued a Final Certificate of Payment.

(f) The Contractor shall have delivered to the District all manuals and materials required by the Contract Documents.

(g) The Contractor shall have completed final clean up as required by Paragraph 3.12.

9.12 SUBSTITUTION OF SECURITIES

The District will permit the substitution of securities in accordance with the provisions of Public Contract Code section 22300.

ARTICLE 10

PROTECTION OF PERSONS AND PROPERTY

10.1 SAFETY PRECAUTIONS AND PROGRAMS

10.1.1 Contractor Responsibility.

The Contractor shall be responsible for all damages to persons or property that occur as a result of its fault or negligence in connection with the prosecution of this Contract and shall take all necessary measures and be responsible for the proper care and protection of all materials delivered and work performed until completion and final acceptance by the District. All work shall be solely at the Contractor's risk, with the exception of damage to the work caused by "acts of God" as defined in Public Contract Code Section 7105(b)(2).

Contractor shall take, and require subcontractor to take, all necessary precautions for safety of workers on the Work and shall comply with all applicable federal, state, local and other safety laws, standards, orders, rules, regulations, and building codes to prevent accidents or injury to persons on, about, or adjacent to premises where Work is being performed and to provide a safe and healthful place of employment. In addition to meeting all requirements of OSHA, Cal-OSHA, state, and local codes, Contractor shall furnish, erect and properly maintain at all times, as directed by District or Architect or required by conditions and progress of work, all necessary safety devices, safeguards, construction canopies, signs, audible devices for protection of the blind, safety rails, belts and nets, barriers, lights, and watchmen for protection of workers and the public, and shall post danger signs warning against hazards created by such features in the course of construction. Contractor shall designate a responsible member of its organization on the Work, whose duty shall be to post information regarding protection and obligations of workers and other notices required under occupational safety and health laws, to comply with reporting and other occupational safety requirements, and to protect the life, safety and health of workers. The name and position of person so designated shall be reported to District by Contractor. Contractor shall correct any violations of safety laws, rules, orders, standards, or regulations. Upon the issuance of a citation or notice of violation by

the Division of Occupational Safety and Health, such violation shall be corrected promptly.

10.1.2 Subcontractor Responsibility.

Contractor shall require that Subcontractors participate in, and enforce, the safety and loss prevention programs established by the Contractor for the Project, which will cover all Work performed by the Contractor and its Subcontractors. Each Subcontractor shall designate a responsible member of its organization whose duties shall include loss and accident prevention, and who shall have the responsibility and full authority to enforce the program. This person shall attend meetings with the representatives of the various Subcontractors employed to ensure that all employees understand and comply with the programs.

10.1.3 Cooperation.

All Subcontractors and material or equipment suppliers, shall cooperate fully with Contractor, the District, and all insurance carriers and loss prevention engineers.

10.1.4 Accident Reports.

Subcontractors shall immediately, within two (2) days, report in writing to the Contractor all accidents whatsoever arising out of, or in connection with, the performance of the Work, whether on or off the Site, which caused death, personal injury, or property damage, giving full details and statements of witnesses. In addition, if death or serious injuries or serious damages are caused, the accident shall be reported within four (4) days by telephone or messenger. Contractor shall thereafter immediately, within two (2) days, report the facts in writing to the District and the Architect giving full details of the accident.

10.1.5 First-Aid Supplies at Site.

The Contractor will provide and maintain at the Site first-aid supplies which complies with the current Occupational Safety and Health Regulations.

10.1.6 Material Safety Data Sheets and Compliance with Proposition 65.

(a) Contractor is required to have material safety data sheets available in a readily accessible place at the job site for any material requiring a material safety data sheet per the Federal "hazard communication" standard, or employees' "right-to-know law." The Contractor is also required to properly label any substance brought into the job site, and require that any person working with the material, or within the general area of the material, is informed of the hazards of the substance and follows proper handling and protection procedures.

Contractor is required to comply with the provisions of California Health and Safety Code section 25249, et seq., which requires the posting and giving of notice to persons who may be exposed to any chemical known to the State of

California to cause cancer. The Contractor agrees to familiarize itself with the provisions of this section, and to comply fully with its requirements.

10.1.7 Non-Utilization of Asbestos Material.

NO ASBESTOS OR ASBESTOS-CONTAINING PRODUCTS SHALL BE USED IN THIS CONSTRUCTION OR IN ANY TOOLS, DEVICES, CLOTHING, OR EQUIPMENT USED TO EFFECT THIS CONSTRUCTION.

Asbestos and/or asbestos-containing products shall be defined as all items containing, but not limited to, chrysotile, amosite, anthophyllite, tremolite, and antinolite.

Any or all material containing greater than one-tenth of one percent (>.1%) asbestos shall be defined as asbestos-containing material.

All Work or materials found to contain asbestos or Work or material installed with asbestos-containing equipment will be immediately rejected and this Work will be removed at no additional cost to the District.

Decontamination and removal of Work found to contain asbestos or Work installed with asbestos-containing equipment shall be done only under supervision of a qualified consultant, knowledgeable in the field of asbestos abatement and accredited by the Environmental Protection Agency.

The asbestos removal contractor shall be an EPA accredited contractor qualified in the removal of asbestos and shall be chosen and approved by the asbestos consultant, who shall have sole discretion and final determination in this matter.

The asbestos consultant shall be chosen and approved by the District, who shall have sole discretion and final determination in this matter.

The Work will not be accepted until asbestos contamination is reduced to levels deemed acceptable by the asbestos consultant.

Interface of Work under this Contract with work containing asbestos shall be executed by the Contractor at his risk and at his discretion, with full knowledge of the currently accepted standards, hazards, risks, and liabilities associated with asbestos work and asbestos-containing products. By execution of this Contract, the Contractor acknowledges the above and agrees to hold harmless District and its assigns for all asbestos liability which may be associated with this work and agrees to instruct his employees with respect to the above-mentioned standards, hazards, risks, and liabilities.

10.2 SAFETY OF PERSONS AND PROPERTY

10.2.1 The Contractor.

The Contractor shall take reasonable precautions for the safety of, and shall provide reasonable protection to prevent damage, injury, or loss to:

(a) Employees on the Work and other persons who may be affected thereby;

(b) The Work, material, and equipment to be incorporated therein, whether in storage on or off the Site, under the care, custody, or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and

(c) Other property at the Site or adjacent thereto such as trees, shrubs, lawns, walks, pavement, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

Contractor is constructive owner of Project site as more fully discussed in Paragraph 6.2.

10.2.2 Contractor Notices.

The Contractor shall give notices and comply with applicable laws, ordinances, rules, regulations, and lawful orders of public authorities bearing on the safety of persons or property or their protection from damage, injury, or loss.

10.2.3 Safety Barriers and Safeguards.

The Contractor shall erect and maintain, as required by existing conditions and performance of the Contract, reasonable safeguards for safety and protection, including posting danger signs and other warnings against hazards, promulgating safety regulations, and notifying owners and users of adjacent sites and utilities.

10.2.4 Use or Storage of Hazardous Material.

When use or storage of explosives, other hazardous materials or equipment, or unusual methods are necessary for execution of the Work, the Contractor shall exercise utmost care and carry on such activities under supervision of properly qualified personnel. The Contractor shall notify the District any time that explosives or hazardous materials are expected to be stored on Site. Location of storage shall be coordinated with the District and local fire authorities.

10.2.5 Protection of Work.

The Contractor and Subcontractors shall continuously protect the Work, the District's property, and the property of others, from damage, injury, or loss arising in connection with operations under the Contract Documents. The Contractor and Subcontractors, at their own expense, shall make good any such damage, injury, or loss, except such as may be solely due to, or caused by, agents or employees of the District.

The Contractor, at Contractor's expense, will remove all mud, water, or other elements as may be required for the proper protection and prosecution of its Work.

Contractor shall take adequate precautions to protect existing roads, sidewalks, curbs, pavements, utilities, adjoining property and structures (including, without

limitation, protection from settlement or loss of lateral support), and to avoid damage thereto, and repair any damage thereto caused by construction operations. All permits, licenses, or inspection fees required for such repair Work shall be obtained and paid for by Contractor.

10.2.6 Requirements for Existing Sites.

Contractor shall (unless waived by the District in writing):

(a) When performing construction on existing sites, become informed and take into specific account the maturity of the students on the Site; and perform Work which may interfere with school routine before or after school hours, enclose working area with a substantial barricade, and arrange Work to cause a minimum amount of inconvenience and danger to students and faculty in their regular school activities. The Contractor shall comply with specifications and directives of the District regarding the timing of certain construction activities in order to avoid unnecessary interference with school functioning.

(b) Provide substantial barricades around any shrubs or trees indicated to be preserved.

(c) Deliver materials to building area over route designated by Architect.

(d) Take preventive measures to eliminate objectionable dust, noise, or other disturbances.

(e) Confine apparatus, the storage of materials, and the operations of workers to limits indicated by law, ordinances, permits or directions of Architect; and not interfere with the Work or unreasonably encumber premises or overload any structure with materials; and enforce all instructions of District and Architect regarding signs, advertising, fires, and smoking and require that all workers comply with all regulations while on the Project site.

(f) Take care to prevent disturbing or covering any survey markers, monuments, or other devices marking property boundaries or corners. If such markers are disturbed by accident, they shall be replaced by an approved land surveyor or civil engineer and all maps and records required therefrom shall be filed with county and local authorities, at no cost to the District. All filing and plan check fees shall be paid by Contractor.

(g) Provide District on request with Contractor's written safety program and safety plan for each site.

10.2.7 Shoring and Structural Loading.

The Contractor shall not impose structural loading upon any part of the Work under construction or upon existing construction on or adjacent to the Site in excess of safe limits, or loading such as to result in damage to the structural, architectural,

mechanical, electrical, or other components of the Work. The design of all temporary construction equipment and appliances used in construction of the Work and not a permanent part thereof, including, without limitation, hoisting equipment, cribbing, shoring, and temporary bracing of structural steel, is the sole responsibility of the Contractor. All such items shall conform with the requirements of governing codes and all laws, ordinances, rules, regulations, and orders of all authorities having jurisdiction. The Contractor shall take special precautions, such as shoring of masonry walls and temporary tie bracing of structural steel work, to prevent possible wind damage during construction of the Work. The installation of such bracing or shoring shall not damage the Work in place or the Work installed by others. Any damage which does occur shall be promptly repaired by the Contractor at no cost to the District.

10.2.8 Conformance Within Established Limits.

The Contractor and Subcontractors shall confine their construction equipment, the storage of materials, and the operations of workers to the limits indicated by laws, ordinances, permits, and the limits established by the District or the Contractor, and shall not unreasonably encumber the premises with construction equipment or materials.

10.2.9 Subcontractor Enforcement of Rules.

Subcontractors shall enforce the District's and the Contractor's instructions, laws, and regulations regarding signs, advertisements, fires, smoking, the presence of liquor, and the presence of firearms by any person at the Site.

10.2.10 Site Access.

The Contractor and the Subcontractors shall use only those ingress and egress routes designated by the District, observe the boundaries of the Site designated by the District, park only in those areas designated by the District, which areas may be on or off the Site, and comply with any parking control program established by the District, such as furnishing license plate information and placing identifying stickers on vehicles.

10.2.11 Security Services.

The Contractor shall be responsible for providing security services for the Site as needed for the protection of the Site and as determined in the District's sole discretion.

10.3 EMERGENCIES

10.3.1 Emergency Action.

In an emergency affecting the safety of persons or property, the Contractor shall take any action necessary, at the Contractor's discretion, to prevent threatened damage, injury, or loss. Additional compensation or extension of time claimed by the Contractor on account of an emergency shall be determined as provided in Article 7.

10.3.2 Accident Reports.

The Contractor shall promptly report in writing to the District all accidents arising out of or in connection with the Work, which caused death, personal injury, or property damage, giving full details and statements of any witnesses in conformance with Article 10.1.4. In addition, if death, serious personal injuries, or serious property damages are caused, the accident shall be reported in accordance with Paragraph 10.1.4, immediately by telephone or messenger to the District.

10.4 HAZARDOUS MATERIALS

10.4.1 Discovery of Hazardous Materials.

In the event the Contractor encounters or suspects the presence on the job site of material reasonably believed to be asbestos, polychlorinated biphenyl (PCB), or any other material defined as being hazardous by § 25249.5 of the California Health and Safety Code, which has not been rendered harmless, the Contractor shall immediately stop Work in the area affected and report the condition to the District and the Architect in writing, whether or not such material was generated by the Contractor or the District. The Work in the affected area shall not thereafter be resumed, except by written agreement of the District and the Contractor, if in fact the material is asbestos, polychlorinated biphenyl (PCB), or other hazardous material, and has not been rendered harmless. The Work in the affected area shall be resumed only in the absence of asbestos, polychlorinated biphenyl (PCB), or other hazardous material, or when it has been rendered harmless by written agreement of the District and the Contractor.

10.4.2 Hazardous Material Work Limitations.

In the event that the presence of hazardous materials is suspected or discovered on the Site (except in cases where asbestos and other hazardous material work in the Contractor's responsibility), the District shall retain an independent testing laboratory to determine the nature of the material encountered and whether corrective measures or remedial action is required. The Contractor shall not be required pursuant to Article 7 to perform without consent any Work in the affected area of the Site relating to asbestos, polychlorinated biphenyl (PCB), or other hazardous material, until any known or suspected hazardous material has been removed, or rendered harmless, or determined to be harmless by District, as certified by an independent testing laboratory and approved by the appropriate government agency.

10.4.3 Indemnification by Contractor for Hazardous Material Caused by Contractor.

In the event the hazardous materials on the Project Site is caused by the Contractor, the Contractor shall pay for all costs of testing and remediation, if any, and shall compensate the District for any additional costs incurred as a result of Contractor's generation of hazardous material on the Project Site. In addition, the Contractor shall defend, indemnify and hold harmless District and its agents, officers, and employees

from and against any and all claims, damages, losses, costs and expenses incurred in connection with, arising out of, or relating to, the presence of hazardous material on the Project Site.

10.4.4 Terms of Hazardous Material Provision.

The terms of this Hazardous Material provision shall survive the completion of the Work and/or any termination of this Contract.

ARTICLE 11

INSURANCE AND BONDS

11.1 CONTRACTOR'S LIABILITY INSURANCE

11.1.1 Insurance Requirements.

Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California as admitted carriers with a financial rating of at least an A status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, such insurance as will protect the District from claims set forth below, which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

(a) Claims for damages because of bodily injury, sickness, disease, or death of any person District would require indemnification and coverage for employee claim;

(b) Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;

(c) Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;

(d) Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;

(e) Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and

(f) Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)

(g) Claims involving sudden or accidental discharge of contaminants or pollutants.

11.1.2 Subcontractor Insurance Requirements.

The Contractor shall require its Subcontractors to take out and maintain similar public liability insurance and property damage insurance required under Paragraph 11.1.1 in like amounts. A "claims made" or modified "occurrence" policy shall not satisfy the requirements of Paragraph 11.1.1 without prior written approval of the District.

11.1.3 Additional Insured Endorsement Requirements.

The Contractor shall name, on any policy of insurance required under Paragraph 11.1, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as additional insureds. Subcontractors shall name the Contractor, the District, Architect, Inspector, the State of California, their officers, employees, agents and independent contractors as additional insureds. The Additional Insured Endorsement included on all such insurance policies shall be a CG 2010 (11/85) or CG 2010 (10/93) form and state that coverage is afforded the additional insured with respect to claims arising out of operations performed by or on behalf of the insured. If the additional insureds have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor pursuant to 11.1.1 must be designated in the policy as primary to any insurance obtained by the District. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

11.1.4 Specific Insurance Requirements.

Contractor shall take out and maintain and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

1. Comprehensive General Liability Insurance with a combined single limit per occurrence of not less than $2,000,000.00 or Commercial General Liability Insurance (including automobile insurance) which provides limits of not less than:

   (a) Per occurrence (combined single limit) $1,000,000.00
   (b) Project Specific Aggregate (for this project only) $1,000,000.00
   (c) Products and Completed Operations..... $1,000,000.00
   (d) Personal and Advertising Injury Limit..... $1,000,000.00

2. Insurance Covering Special Hazards

The following Special hazards shall be covered by riders or riders to above mentioned public liability insurance or property damage insurance policy or policies of insurance, in amounts as follows:

(a)	Automotive and truck where operated in amounts	$1,000,000.00
(b)	Material Hoist where used in amounts.....	$1,000,000.00
(c)	Explosion, Collapse and Underground (XCU coverage)	$1,000,000.00

3. In addition, provide Excess Liability Insurance coverage in the amount of Two Million Dollars ($2,000,000.00).

11.2 WORKERS' COMPENSATION INSURANCE

During the term of this Contract, the Contractor shall provide workers' compensation insurance for all of the Contractor's employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the Contractor's Work is subcontracted, the Contractor shall require the Subcontractor to provide workers' compensation insurance for all the Subcontractor's employees engaged in Work under the subcontract. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in Work under this Contract on or at the Site of the Project is not protected under the Workers' Compensation laws, the Contractor shall provide or cause a Subcontractor to provide adequate insurance coverage for the protection of those employees not otherwise protected. The Contractor shall file with the District certificates of insurance as required under Paragraph 11.6 and in compliance with Labor Code § 3700.

11.3 BUILDER'S RISK / "ALL RISK" INSURANCE

11.3.1 Course-of-Construction Insurance Requirements.

The Contractor, during the progress of the Work and until final acceptance of the Work by District upon completion of the entire Contract, shall maintain Builder's Risk, Course of Construction or similar first party property coverage issued on a replacement cost value basis consistent with the total replacement cost of all insurable Work and the Project included within the Contract Documents. Coverage is to insure against all risks of accidental direct physical loss, and must include, by the basic grant of coverage or by endorsement, the perils of vandalism, malicious mischief (both without any limitation regarding vacancy or occupancy), fire, sprinkler leakage, civil authority, collapse, wind, lightning, smoke and riot. The coverage must include debris removal, demolition, increased costs due to enforcement of building ordinance and law in the repair and replacement of damage and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project which is the subject of the Contract Documents, including completed Work and Work in progress, to the full insurable value thereof. Such insurance shall include the District and the Architect as additional named insureds, and any other person with an insurable interest as designated by the District.

The Contractor shall submit to the District for its approval all items deemed to be uninsurable. The risk of the damage to the Work due to the perils covered by the "Builder's Risk/All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Contractor and the surety, and no claims for such loss or damage shall be recognized by the District nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.

11.4 FIRE INSURANCE

Before the commencement of the Work, the Contractor shall procure, maintain, and cause to be maintained at the Contractor's expense, fire insurance on all Work subject to loss or damage by fire. The amount of fire insurance shall be sufficient to protect the Project against loss or damage in full until the Work is accepted by the District.

11.5 OTHER INSURANCE

The Contractor shall provide all other insurance required to be maintained under applicable laws, ordinances, rules, and regulations.

11.6 PROOF OF INSURANCE

The Contractor shall not commence Work nor shall it allow any Subcontractor to commence Work under this Contract until all required insurance and certificates have been obtained and delivered in duplicate to the District for approval subject to the following requirements:

(a) Certificates and insurance policies shall include the following clause:

> "This policy shall not be non-renewed, canceled, or reduced in required limits of liability or amounts of insurance until notice has been mailed to the District. Date of cancellation or reduction may not be less than thirty (30) days after the date of mailing notice."

(b) Certificates of insurance shall state in particular those insured, the extent of insurance, location and operation to which the insurance applies, the expiration date, and cancellation and reduction notices.

(c) Certificates of insurance shall clearly state that the District and the Architect are named as additional insureds under the policy described and that such insurance policy shall be primary to any insurance or self-insurance maintained by District.

(d) The Contractor and its Subcontractors shall produce a certified copy of any insurance policy required under this Section upon written request of the District.

11.7 COMPLIANCE

In the event of the failure of any contractor to furnish and maintain any insurance required by this Article 11, the Contractor shall be in default under the Contract. Compliance by Contractor with the requirement to carry insurance and furnish certificates or policies evidencing the same shall not relieve the Contractor from liability assumed under any provision of the Contract Documents, including, without limitation, the obligation to defend and indemnify the District and the Architect.

11.8 WAIVER OF SUBROGATION

Contractor waives (to the extent permitted by law) any right to recover against the District for damages to the Work, any part thereof, or any and all claims arising by reason of any of the foregoing, but only to the extent that such damages and/or claims are covered by property insurance and only to the extent of such coverage (which shall exclude deductible amounts) by insurance actually carried by the District.

The provisions of this section are intended to restrict each party to recovery against insurance carriers only to the extent of such coverage and waive fully and for the benefit of each, any rights and/or claims which might give rise to a right of subrogation in any insurance carrier. The District and the Contractor shall each obtain in all policies of insurance carried by either of them, a waiver by the insurance companies thereunder of all rights of recovery by way of subrogation for any damages or claims covered by the insurance.

11.9 PERFORMANCE AND PAYMENT BONDS

11.9.1 Bond Requirements.

Unless otherwise specified in the Special Conditions, prior to commencing any portion of the Work, the Contractor shall furnish separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the District, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the District. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bonds, the District may terminate the Contract for cause.

11.9.2 Surety Qualification.

Only bonds executed by admitted Surety insurers as defined in Code of Civil Procedure § 995.120 shall be accepted. Surety must be a California-admitted surety and listed by the U.S. Treasury with a bonding capacity in excess of the Project cost.

11.9.3 Alternate Surety Qualifications.

If a California-admitted surety insurer issuing bonds does not meet these requirements, the insurer will be considered qualified if it is in conformance with § 995.660 of the California Code of Civil Procedure and proof of such is provided to the District.

11.9.4 Insolvency of Surety.

If at any time during the course of the contract the Contractor's Surety becomes insolvent, Contractor will be required to obtain replacement bonds, with a qualified surety, for an amount to be determined by the District up to the full value of the contract.

ARTICLE 12

UNCOVERING AND CORRECTION OF WORK

12.1 UNCOVERING OF WORK

12.1.1 Uncovering Work for Required Inspections.

If a portion of the Work is covered without Inspector or Architect approval or not in compliance with the Contract Documents, it must, if required in writing by the Inspector or the Architect, be uncovered for the Inspector's or the Architect's observation and be replaced at the Contractor's expense without change in the Contract Sum or Time.

12.1.2 Costs for Inspections not Required.

If a portion of the Work has been covered which the Inspector or the Architect has not specifically requested to observe prior to its being covered, the Inspector or the Architect may request to see such Work, and it shall be uncovered by the Contractor. If such Work is in accordance with the Contract Documents, costs of uncover and replacement shall, by appropriate Change Order, be charged to the District. If such Work is not in accordance with Contract Documents, the Contractor shall pay such costs unless the condition was caused by the District or a separate contractor, in which event the District shall be responsible for payment of such costs to the Contractor.

12.2 CORRECTION OF WORK

12.2.1 Correction of Rejected Work.

The Contractor shall promptly correct the Work rejected by the Inspector or the District upon recommendation of the Architect as failing to conform to the requirements of the Contract Documents, whether observed before or after Completion and whether or not fabricated, installed, or completed. The Contractor shall bear costs of correcting the rejected Work, including additional testing, inspections, and compensation for the Inspector's or the Architect's services and expenses made necessary thereby.

12.2.2 One-Year Warranty Corrections.

If, within one (1) years after the date of Completion of the Work or a designated portion thereof, or after the date for commencement of warranties established under Paragraph 9.9.1, or by the terms of an applicable special warranty required by the Contract Documents, any of the Work is found to be not in accordance with the requirements of the Contract Documents, the Contractor shall correct it promptly after receipt of written notice from the District to do so unless the District has previously given the Contractor a written acceptance of such condition. This period of one (1) year shall be extended with respect to portions of the Work first performed after Completion by the period of time between Completion and the actual performance of the Work. This obligation under this Paragraph 12.2.2 shall survive acceptance of the Work under the Contract and termination of the Contract. The District shall give such notice promptly after discovery of the condition.

12.2.3 District's Rights if Contractor Fails to Correct.

If the Contractor fails to correct nonconforming Work within a reasonable time, the District may correct it, pursuant to Article 9.

ARTICLE 13

MISCELLANEOUS PROVISIONS

13.1 GOVERNING LAW

The Contract shall be governed by the law of the place where the Project is located.

13.2 SUCCESSORS AND ASSIGNS

The District and the Contractor respectively bind themselves, their partners, successors, assigns, and legal representatives to the other party hereto and to partners, successors, assigns, and legal representatives of such other party in respect to covenants, agreements, and obligations contained in the Contract Documents. Neither party to the Contract shall assign the Contract as a whole without written consent of the other. If

either party attempts to make such an assignment without such consent, that party shall nevertheless remain legally responsible for all obligations under the Contract.

13.3 WRITTEN NOTICE

In the absence of specific notice requirements in the Contract Documents, written notice shall be deemed to have been duly served if delivered in person to the individual, member of the firm or entity, or to an officer of the corporation for which it was intended, or if delivered at or sent by registered or certified mail to the last business address known to the party giving notice.

13.4 RIGHTS AND REMEDIES

13.4.1 Duties and Obligations Cumulative.

Duties and obligations imposed by the Contract Documents and rights and remedies available thereunder shall be in addition to and not a limitation of duties, obligations, rights, and remedies otherwise imposed or available by law.

13.4.2 No Waiver.

No action or failure to act by the Inspector, the District, or the Architect shall constitute a waiver of a right or duty afforded them under the Contract Documents, nor shall such action or failure to act constitute approval of or acquiescence in a breach thereunder, except as may be specifically agreed in writing.

13.5 TESTS AND INSPECTIONS

13.5.1 Compliance.

Tests, inspections, and approvals of portions of the Work required by the Contract Documents will comply with Title 24, and with all other laws, ordinances, rules, regulations, or orders of public authorities having jurisdiction.

13.5.2 Independent Testing Laboratory.

The District will select and pay an independent testing laboratory to conduct all tests and inspections. Selection of the materials required to be tested shall be made by the laboratory or the District's representative and not by the Contractor. Any costs or expenses of inspection or testing incurred outside of a fifty (50) mile radius from the Project Site or not located in a contiguous county to the Site, whichever distance is greater, shall be paid for by the District, invoiced by the District to the Contractor, and deducted from the next Progress Payment.

13.5.3 Advance Notice to Inspector.

The Contractor shall notify the Inspector, in writing, at least 24 hours in advance of its readiness for required observation or inspection so that the Inspector may arrange

for same. The Contractor shall notify the Inspector, in writing, at least 24 hours in advance of the manufacture of material to be supplied under the Contract Documents which must, by terms of the Contract Documents, be tested in order that the Inspector may arrange for the testing of the material at the source of supply.

13.5.4 Testing Off-Site.

Any material shipped by the Contractor from the source of supply, prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said Inspector that such testing and inspection will not be required, shall not be incorporated in the Work.

13.5.5 Additional Testing or Inspection.

If the Inspector, the Architect, the District, or public authority having jurisdiction determines that portions of the Work require additional testing, inspection, or approval not included under Paragraph 13.5.1, the Inspector will, upon written authorization from the District, make arrangements for such additional testing, inspection, or approval. The District shall bear such costs except as provided in Paragraph 13.5.7.

13.5.6 Costs for Retesting.

If such procedures for testing, inspection, or approval under Paragraphs 13.5.1 and 13.5.2 reveal failure of the portions of the Work to comply with requirements established by the Contract Documents, the Contractor shall bear all costs arising from such failure, including those of re-testing, re-inspection, or re-approval, including, but not limited to, compensation for the Architect's services and expenses. Any such costs shall be paid by the District, invoiced to the Contractor, and deducted from the next Progress Payment.

13.5.7 Costs for Premature Test.

In the event the Contractor requests any test or inspection for the Project and is not completely ready for the inspection, the Contractor shall be invoiced by the District for all costs and expenses resulting from that testing or inspection, including, but not limited to, the Inspector's and Architect's fees and expenses, and the amount of the invoice of shall be deducted from the next Progress Payment.

13.6 TRENCH EXCAVATION

13.6.1 Trenches Greater Than Five Feet.

Pursuant to Labor Code § 6705, if the Contract Price exceeds $25,000 and involves the excavation of any trench or trenches five (5) feet or more in depth, the Contractor shall, in advance of excavation, submit to the District or a registered civil or structural engineer employed by the District or Architect, a detailed plan showing the design of shoring for protection from the hazard of caving ground during the excavation of such trench or trenches.

13.6.2 Excavation Safety.

If such plan varies from the Shoring System Standards established by the Construction Safety Orders, the plan shall be prepared by a registered civil or structural engineer, but in no case shall such plan be less effective than that required by the Construction Safety Orders. No excavation of such trench or trenches shall be commenced until said plan has been accepted by the District or by the person to whom authority to accept has been delegated by the District.

13.6.3 No Tort Liability of District.

Pursuant to Labor Code § 6705, nothing in this Article shall impose tort liability upon the District or any of its employees.

13.6.4 No Excavation Without Permits.

The Contractor shall not commence any excavation Work until it has secured all necessary permits including the required CAL OSHA excavation/shoring permit. Any permits shall be prominently displayed on the Site prior to the commencement of any excavation.

13.7 WAGE RATES, TRAVEL, AND SUBSISTENCE

13.7.1 Wage Rates.

Pursuant to the provisions of Article 2 (commencing at § 1720), Chapter 1, Part 7, Division 2, of the Labor Code, the District has obtained the general prevailing rate of per diem wages and the general prevailing rate for holiday and overtime work in the locality in which this public works project is to be performed for each craft, classification, or type of worker needed for this Project from the Director of the Department of Industrial Relations ("Director"). These rates are on file at the administrative office of the DISTRICT and are also available from the Director of the Department of Industrial Relations. Copies will be made available to any interested party on request. The Contractor shall post a copy of such wage rates at appropriate, conspicuous, weatherproof points at the Site.

Any worker employed to perform work on the Project, but such work is not covered by any classification listed in the published general prevailing wage rate determinations or per diem wages determined by the Director of the Department of Industrial Relations, shall be paid not less than the minimum rate of wages specified therein for the classification which most nearly corresponds to the employment of such person in such classification.

13.7.2 Holiday and Overtime Pay.

Holiday and overtime work, when permitted by law, shall be paid for at the rate set forth in the prevailing wage rate determinations issued by the Director of the Department of Industrial Relations or at least one and one-half (1½) times the specified

basic rate of per diem wages, plus employer payments, unless otherwise specified in the contract documents or authorized by law.

13.7.3 Wage Rates Not Affected by Subcontracts.

The Contractor shall pay and shall cause to be paid each worker engaged in the execution of the Work on the Project not less than the general prevailing rate of per diem wages determined by the Director, regardless of any contractual relationship which may be alleged to exist between the Contractor or any Subcontractor and such workers.

13.7.4 Per Diem Wages.

The Contractor shall pay and shall cause to be paid to each worker needed to execute the Work on the Project per diem wages including, but not limited to, employer payments for health and welfare, pensions, vacation, travel time and subsistence pay as provided for in Labor Code §1773.1.

13.7.5 Forfeiture and Payments.

Pursuant to Labor Code §1775 and the District's Labor Compliance Program, the Contractor shall forfeit to the District, not more than Two-Hundred Dollars ($200.00) for each calendar day, or portion thereof, for each worker paid less than the prevailing wages rates as determined by the Director of the Department of Industrial Relations, for the work or craft in which the worker is employed for any Work done under the Agreement by the Contractor or by any Subcontractor under it. The amount of the penalty shall be determined by the Labor Commissioner and shall be based on consideration of: (1) whether the Contractor or Subcontractor's failure to pay the correct rate of per diem wages was a good faith mistake and, if so, the error was promptly and voluntarily correct upon being brought to the attention of the Contractor or Subcontractor; and (2) whether the Contractor or Subcontractor has a prior record of failing to meet its prevailing wage obligations. Further details regarding the enforcement of paying prevailing wage rates, reporting violations, withholding contract payments, forfeitures and hearing to review withholding of contract payments are set forth in the District's Labor Compliance Program.

13.8 RECORDS OF WAGES PAID

13.8.1 Payroll Records.

(a) Pursuant to §1776 of the Labor Code, each Contractor and Subcontractor shall keep an accurate payroll record showing the name, address, social security number, work classification and straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker or other employee employed by him or her in connection with the Project.

(b) All payroll records shall be certified and submitted to the District with each application for payment, but shall not be submitted less than once per month. All payroll records shall be available for inspection at all reasonable hours at the principal office of the Contractor on the following basis:

(1) A certified copy of an employee's payroll record shall be made available for inspection or furnished to the employee or his or her authorized representative on request.

(2) A certified copy of all payroll records shall be made available for inspection or furnished upon request to a representative of District, the Division of Labor Standards Enforcement or the Division of Apprenticeship Standards of the Department of Industrial Relations.

(3) A certified copy of all payroll records shall be made available upon request by the public for inspection or for copies thereof. However, a request by the public shall be made through the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement. If the requested payroll records have not been provided pursuant to Paragraph (2) above, the requesting party shall, prior to being provided the records, reimburse the costs, according to law for the preparation by the Contractor, Subcontractor(s), and the entity through which the request was made. The public shall not be given access to such records at the principal office of the Contractor.

(c) The certified payroll records shall be on forms provided by the Division of Labor Standards Enforcement or shall contain the same information as the forms provided by the Division of Labor Standards Enforcement.

(d) The Contractor or Subcontractor(s) shall file a certified copy of all payroll records with the entity that requested such records within 10 calendar days after receipt of a written request.

(e) Any copy of records made available for inspection as copies and furnished upon request to the public or any public agency by the District, the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement shall be marked or obliterated to prevent disclosure of an individual's name, address and social security number. The name and address of the Contractor awarded the Contract or the Subcontractor(s) performing the Contract shall not be marked or obliterated. Any copy of records made available for inspection by, or furnished to, a joint labor-management committee established pursuant to the federal Labor Management Cooperation Act of 1978 (Section 175a of Title 29 of the United States Code) shall be marked or obliterated only to prevent disclosure of an individual's name and social security number. Any copy made available to any agency included in the Joint Enforcement Strike Force on the Underground

Economy or to any other law enforcement agency investigating violations shall not be obliterated and shall include individual's names, address and social security number.

(f) The Contractor shall inform the District of the location of all payroll records, including the street address, city and county, and shall, within five working days, provide a notice of a change of location and address.

(g) The Contractor or Subcontractor(s) shall have 10 calendar days in which to comply subsequent to receipt of a written notice requesting payroll records. In the event that the Contractor or Subcontractor(s) fails to comply within the 10-day period, the Contractor or Subcontractor(s) shall, as a penalty to the District, forfeit One-Hundred Dollars ($100.00) for each calendar day, or portion thereof, for each worker, until strict compliance is effectuated. Upon the request of the Division of Apprenticeship Standards or the Division of Labor Standards Enforcement, these penalties shall be withheld from progress payments then due. Failure to timely respond to a request for payroll records may result in debarment by the Labor Commissioner.

Responsibility for compliance with this Article and the District's Labor Compliance Program shall rest upon the Contractor.

13.8.2 Withholding of Contract Payments & Penalties.

The District may withhold or delay contract payments to the Contractor and/or any Subcontractor if:

(a) The required prevailing rate of per diem wages determined by the Director of the Department of Industrial Relations is not paid to all workers employed on the Project; or

(b) The Contractor or Subcontractor(s) fail to submit all required certified payroll records with each application for payment, but not less than once per month; or

(c) The Contractor or Subcontractor(s) submit incomplete or inadequate payroll records; or

(d) The Contractor or Subcontractor(s) fail to comply with the Labor Code requirements concerning apprentices; or

(e) The Contractor or Subcontractor(s) fail to comply with the District's Labor Compliance Program; or

(f) The Contractor or Subcontractor(s) fail to comply with any applicable state laws governing workers on public works projects.

Any withholding of contract payments and penalties are set forth in the District's Labor Compliance Program.

13.9 APPRENTICES

13.9.1 Apprentice Wages and Definitions.

All apprentices employed by the Contractor to perform services under the Contract shall be paid the standard wage paid to apprentices under the regulations of the craft or trade for which he or she is employed, and as determined by the Director of the Department of Industrial Relations, and shall be employed only at the craft or trade to which he or she is registered. Only apprentices, as defined in §3077 of the Labor Code, who are in training under apprenticeship standards that have been approved by the Chief of the Division of Apprenticeship Standards and who are parties to written apprenticeship agreements under Chapter 4 (commencing with §3070) of Division 3, are eligible to be employed under this Contract. The employment and training of each apprentice shall be in accordance with the apprenticeship standards and apprentice agreements under which he or she is training, or in accordance with the rules and regulations of the California Apprenticeship Council.

13.9.2 Employment of Apprentices.

Contractor agrees to comply with the requirements of Labor Code §1777.5. The Contractor awarded the Project, or any Subcontractor under him or her, when performing any of the Work under the Contract or subcontract, employs workers in any apprenticeable craft or trade, the Contractor and Subcontractor shall employ apprentices in the ratio set forth in Labor Code §1777.5. The Contractor or any Subcontractor must apply to any apprenticeship program in the craft or trade that can provide apprentices to the Project site for a certificate approving the contractor or subcontractor under the apprenticeship standards for the employment and training of apprentices in the area or industry affected. However, the decision of the apprenticeship program to approve or deny a certificate shall be subject to review by the Administrator of Apprenticeship. The apprenticeship program or programs, upon approving the Contractor or Subcontractor, shall arrange for the dispatch of apprentices to the Contractor or Subcontractor upon the Contractor's or Subcontractor's request. "Apprenticeable craft or trade" as used in this Article means a craft or trade determined as an apprenticeable occupation in accordance with the rules and regulations prescribed by the California Apprenticeship Council. The ratio of work performed by apprentices to journeyman employed in a particular craft or trade on the Project shall be in accordance with Labor Code §1777.5.

13.9.3 Submission of Contract Information.

Prior to commencing work on the Project, the Contractor and Subcontractors shall submit contract award information to the applicable apprenticeship program(s) that can supply apprentices to the Project and make the request for the dispatch of apprentices in accordance with the Labor Code. The information submitted shall include an estimate of journeyman hours to be performed under the Contact, the number of apprentices

proposed to be employed, and the approximate dates the apprentices would be employed. A copy of this information shall also be submitted to the District if requested. Within 60 days after concluding work on the Project, the Contractor and Subcontractors shall submit to the District, if requested, and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the Project.

13.9.4 Apprentice Fund.

The Contractor or any Subcontractor under him or her, who, in performing any of the Work under the Contract, employs journeymen or apprentices in any apprenticeable craft or trade shall contribute to the California Apprenticeship Council the same amount that the Director determines is the prevailing amount of apprenticeship training contributions in the area of the Project. The Contractor and Subcontractors may take as a credit for payments to the California Apprenticeship Council any amounts paid by the Contractor or Subcontractor to an approved apprenticeship program that can supply apprentices to the Project. The Contractor and Subcontractors may add the amount of the contributions in computing his or her bid for the Contract.

13.9.5 Prime Contractor Compliance.

The responsibility of compliance with Article 13 and §1777.5 of the Labor Code for all apprenticeable occupations is with the Prime Contractor. Any Contractor or Subcontractor that knowingly violates the provisions of this Article or Labor Code §1777.5 shall be subject to the penalties set forth in Labor Code §1777.7 and the District's Labor Compliance Program.

13.10 ASSIGNMENT OF ANTITRUST CLAIMS

13.10.1 Application.

Pursuant to Government Code § 4551, in entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to a public works contract, the Contractor or Subcontractor offers and agrees to assign to the District all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act, (15 U.S.C. § 15) or under the Cartwright Act (Chapter 2 [commencing with § 16700] of Part 2 of Division 7 of the Business and Professions Code), arising from the purchase of goods, services, or materials pursuant to the public works contract or the subcontract. This assignment shall be made and become effective at the time the awarding body tenders final payment to the Contractor, without further acknowledgment by the parties. If the District receives, either through judgment or settlement, a monetary recovery for a cause of action assigned under Chapter 11 (commencing with § 4550) of Division 5 of Title 1 of the Government Code, the assignor shall be entitled to receive reimbursement for actual legal costs incurred and may, upon demand, recover from the District any portion of the recovery, including treble damages, attributable to overcharges that were paid by the assignor but were not paid by the District as part of the bid price, less the expenses incurred in obtaining that portion of the recovery.

13.10.2 Assignment of Claim.

Upon demand in writing by the assignor, the District shall, within one (1) year from such demand, reassign the cause of action assigned pursuant to this Article if the assignor has been or may have been injured by the violation of law for which the cause of action arose and the District has not been injured thereby or the District declines to file a court action for the cause of action.

13.11 STATE AUDIT

Pursuant to and in accordance with the provisions of Government Code § 10532, or any amendments thereto, all books, records, and files of the District, the Contractor, or any Subcontractor connected with the performance of this Contract involving the expenditure of state funds in excess of Ten Thousand Dollars ($10,000.00), including, but not limited to, the administration thereof, shall be subject to the examination and audit of the Office of the Auditor General of the State of California for a period of three (3) years after final payment is made under this Contract. Contractor shall preserve and cause to be preserved such books, records, and files for the audit period.

13.12 STORM WATER POLLUTION PREVENTION

13.12.1 Application

This Section addresses the preparation, implementation and monitoring of a Storm Water Pollution Prevention Plan (SWPPP) for the purpose of preventing the discharge of pollutants from the construction site. This includes the elimination of pollution discharges such as improper dumping, spills or leakage from storage tanks or transfer areas. The District will not issue a Notice to Proceed until Contractor has prepared by a qualified individual and obtained approval of the Permit Registration Documents ("PRDs") that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents from all applicable Local Governing Agencies including the Regional Water Quality Control Board. The Contractor shall also secure a certification that the construction project has met all of the conditions of the General Construction Activity Storm Water Permit (GCASP) and comply with all applicable local, state and federal regulations governing storm water pollution prevention.

13.12.2 References and Materials

- California Stormwater Quality Association New Development and Redevelopment Best Management Practice Handbook

- 2009 California Stormwater Quality Association Construction BMP Handbook .

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements

for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.- Use materials of a class, grade and type needed to meet the performance described in the BMP Handbook.

13.12.3 Preparation and Approval

The Contractor shall prepare by a qualified individual the PRDs that include a Notice of Intent, Construction Risk Calculation, Site Map, SWPPP, Annual Fee and any additional required documents. The Contractor's Qualified SWPPP Developer ("QSD") shall prepare the Storm Water Pollution Prevention Plan (SWPPP) as required to comply with storm water pollution regulations for project sites with storm water discharges associated with construction activity such as clearing or demolition, grading, excavation and other land disturbances. The SWPPP shall apply to all areas that are directly related to construction activity, including but not limited to staging areas, storage yards, material borrow areas, and access roads.

The Contractor shall prepare and submit to the Local Governing Agencies and the District the SWPPP for review and approval if the project sites, new or existing, with land disturbance of 1 or more acres (or less than 1 acres if part of a common plan of development); the construction activity that results in land surface disturbances of less than one acre is part of a larger common plan of development or sale of one or more acres of disturbed land surface; or the construction activity associated with Linear Underground/Overhead Projects ("LUPs") including, but not limited to, those activities necessary for the installation of underground and overhead linear facilities (e.g., conduits, substructures, pipelines, towers, poles, cables, wires, connectors, switching, regulating and transforming equipment and associated ancillary facilities) and include, but are not limited to, underground utility mark-out, potholing, concrete and asphalt cutting and removal, trenching, excavation, boring and drilling, access road and pole/tower pad and cable/wire pull station, substation construction, substructure installation, construction of tower footings and/or foundations, pole and tower installations, pipeline installations, welding, concrete and/or pavement repair or replacement, and stockpile/borrow locations.

The Contractor shall also pay annual renewal fee(s) until the contract is completed and make all such checks payable to the State Water Resources Control Board. The Notice of Intent must be submitted at least two weeks prior to the commencement of construction activities.

The Contractor shall prepare the SWPPP by following the format in Sections 2, 3, 4 and Appendices A through F of the California Stormwater BMP Handbook - Construction, January 2009 edition, published by the California Stormwater Quality Association. The publication is available from:

California Stormwater
Quality Association
P.O. Box 2105
Menlo Park, CA 94026-2105
Phone: (650) 366-1042
E-mail: info@casqa.org

or
https://www.casqa.org/store/products/tabid/154/p-167-construction-handbookportal-initial-subscription.aspx

Where land disturbance is less than 1 acre, any BMPs indicated in the BMP Handbook needed to prevent or minimize storm water pollution shall be implemented at no extra cost to the District.

Within two weeks after Award of Contract by the District, the Contractor shall submit to the District's Civil Engineer one copy of the PRDs including the SWPPP for review. After the District's approval, the Contractor shall provide approved copies of the SWPPP as follows: one copy each to the District's Construction Inspector, District's Construction Manager, District Architect, Commissioned Architect and District's Civil Engineer.

13.12.4 Implementation

The Contractor shall implement the Storm Water Pollution Prevention Plan by doing the following:

Obtain a Waste Discharger Identification (WDID) number from the SWRCB before beginning construction. This number will be issued once your PRDs are administratively accepted and fee is received.

Keep the SWPPP, REAPs, monitoring data on the construction site.

Employ a Qualified SWPPP Practitioner (QSP) to implement the SWPPP during construction and develop Rain Event Action Plans ("REAPs").

Install, inspect, maintain and monitor BMPs required by the General Permit.

Install perimeter controls prior to starting other construction work at the site.

Contain on-site storm water at the jobsite. Do not drain on-site water directly into the storm drain.

Implement the SWPPP.

Provide SWPPP and BMP implementation training for those responsible for implementing the SWPPP.

Designate trained personnel for the proper implementation of the SWPPP.

Conduct monitoring, as required, and assess compliance with the Numeric Action Levels (NALs) or Numeric Effluent Limitations (NELs) appropriate to your project.

Report monitoring data.

Maintain a paper or electronic copy of all required records for three years from the date generated or date submitted, whichever is last. These records must be available at the construction site until construction is completed.

Have a QSD revise the SWPPP as needed to reflect the phases of construction and to suit changing site conditions and instances when properly installed systems are ineffective.

Assist the Distirct with entering any necessary data or information into the Stormwater Multi-Application and Reporting System ("SMARTS") system.

At the end of Construction Contract:

i. Submit Notice of Termination (NOT) into the SMARTS when construction is complete and conditions of termination listed in the NOT have been satisfied. A copy of the NOT can be found at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

ii. Leave in place storm water pollution prevention controls needed for post-construction storm water management and remove those that are not needed as determined by the District. Thereafter, left-in-place controls will be maintained by the District.

iii. Provide Site Monitoring Reports, SWPPP revisions, Compliance Certifications and related documents to the District. Post-construction storm water operation and management plan as mentioned in the compliance certifications are considered to be in place at the end of the Construction Contract.

13.12.5 Monitoring

The Contractor shall conduct examination of storm water pollution prevention controls as required by the State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbing Activities. This includes properly qualified personnel performing all required monitoring, testing, inspections and monitoring. The Contractor shall also conduct examination of storm water pollution prevention controls , as well as before and after

each storm event in compliance with the State Water Resources Control Board Order No. 2009-0009-DWQ, National Pollutant Discharge Elimination System General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction and Land Disturbance Activities (General Permit) (SWRCB, 2009).and at least once each 24-hour period during extended storm events to identify BMP effectiveness and implement repairs or BMP changes as soon as feasible. All maintenance related to a storm event should be completed within 48 hours of the storm event. The Contactor shall also prepare and maintain, at the jobsite, a log of each inspection using Site Monitoring Report forms.

13.12.6 Liabilities and Penalties

Review of the SWPPP and inspection logs by the District shall not relieve the Contractor from liabilities arising from non-compliance with storm water pollution regulations.

Payment of penalties for non-compliance by the Contractor shall be the sole responsibility of the Contractor and will not be reimbursed by the District.

Compliance with the Clean Water Act pertaining to construction activity is the sole responsibility of the Contractor. For any fine(s) levied against the District due to non-compliance by the Contractor, the District will deduct from the final payment due the Contractor the total amount of the fine(s) levied on the District, plus legal and associated costs.

The Contractor shall submit to the District a completed NOI for change of information (Construction Site Information and Material Handling/Management Practices).

ARTICLE 14

TERMINATION OR SUSPENSION OF THE CONTRACT

14.1 TERMINATION BY THE CONTRACTOR FOR CAUSE

14.1.1 Grounds for Termination.

The Contractor may terminate the Contract if the Work is stopped for a period of thirty (30) consecutive days through no act or fault of the Contractor, a Subcontractor, a Sub-subcontractor, their agents or employees, or any other persons performing portions of the Work for whom the Contractor is contractually responsible, for only the following reasons:

(a) Issuance of an order of a court or other public authority having jurisdiction; or

(b) An act of government, such as a declaration of national emergency.

14.1.2 Notice of Termination.

If one of the above reasons exists, the Contractor may, upon written notice of seven (7) additional days to the District, terminate the Contract and recover from the District payment for Work executed and for reasonable costs verified by the Architect with respect to materials, equipment, tools, construction equipment, and machinery, including reasonable overhead, profit, and damages.

14.2 TERMINATION BY THE DISTRICT FOR CAUSE

14.2.1 Grounds for Termination.

The District may terminate the Contractor and/or this Contract for the following reasons:

(a) Persistently or repeatedly refuses or fails to supply enough properly skilled workers or proper materials;

(b) Persistently or repeatedly is absent, without excuse, from the job site;

(c) Fails to make payment to Subcontractors, suppliers, materialmen, etc.;

(d) Persistently disregards laws, ordinances, rules, regulations, or orders of a public authority having jurisdiction;

(e) Becomes bankrupt or insolvent, including the filing of a general assignment for the benefit of creditors; or

(e) Otherwise is in substantial breach of a provision of the Contract Documents.

14.2.2 Notification of Termination.

When any of the above reasons exist, the District may, without prejudice to any other rights or remedies of the District and after giving the Contractor and the Contractor's surety, if any, written notice of seven (7) days, terminate the Contractor and/or this Contract and may, subject to any prior rights of the surety:

(a) Take possession of the Project and of all material, equipment, tools, and construction equipment and machinery thereon owned by the Contractor;

(b) Accept assignment of Subcontracts. Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept; and

(c) Complete the Work by any reasonable method the District may deem expedient, including contracting with a replacement contractor or contractors.

14.2.3 Payments Withheld.

If the District terminates the Contract for one of the reasons stated in Paragraph 14.2.1, the Contractor shall not be entitled to receive further payment until the Work is complete. All costs associated with the termination and completion of the Project shall be the responsibility of the Contractor and/or its surety.

14.2.4 Payments Upon Completion.

If the unpaid balance of the Contract Sum exceeds costs of completing the Work, including compensation for professional services and expenses made necessary thereby, such excess shall be paid to the Contractor. If such costs exceed the unpaid balance, the Contractor shall pay the difference to the District. The amount to be paid to the Contractor, or District, as the case may be, shall be certified by the Architect upon application. This payment obligation shall survive completion of the Contract.

14.3 TERMINATION OF CONTRACT BY DISTRICT (CONTRACTOR NOT AT FAULT)

14.3.1 Termination for Convenience.

District may terminate the Contract upon fifteen (15) calendar days of written notice to the Contractor and use any reasonable method the District deems expedient to complete the project, including contracting with replacement contractor or contractors, if it is found that reasons beyond the control of either the District or Contractor make it impossible or against the District's interest to complete the work. In such a case, the Contractor shall have no claims against the District except: (1) the actual cost for labor, materials, and services performed which may be documented through timesheets, invoices, receipts, or otherwise, and (2) ten percent (10%) profit and overhead, and (3) five percent (5%) termination cost of the total of items (1) and (2). Contractor acknowledges and agrees that if the District (in its sole and absolute discretion) decides to takeover completion of the Project, the Contractor agrees to immediately assign all subcontracts to the District which the District has chosen to accept.

14.3.2 Non-Appropriation of Funds/ Insufficient Funds.

In the event that sufficient funds are not appropriated to complete the Project or the DISTRICT determines that sufficient funds are not available to complete the Project, DISTRICT may terminate or suspend the completion of the Project at any time by giving written notice to the Contractor. In the event that the DISTRICT exercises this option, the DISTRICT shall pay for any and all work and materials completed or delivered onto the site for which value is received, and the value of any and all work then in progress and orders actually placed which cannot be canceled up to the date of notice of

termination. The value of work and materials paid for shall include a factor of fifteen percent (15%) for the Contractor's overhead and profit and there shall be no other costs or expenses paid to Contractor. All work, materials and orders paid for pursuant to this provision shall become the property of the DISTRICT. DISTRICT may, without cause, order Contractor in writing to suspend, delay or interrupt the Project in whole or in part for such period of time as DISTRICT may determine. Adjustment shall be made for increases in the cost of performance of the Agreement caused by suspense, delay or interruption.

14.4 REMEDIES OTHER THAN TERMINATION

If a default occurs, the District may, without prejudice to any other right or remedy, including, without limitation, its right to terminate the Contract pursuant to Article 14.2, do any of the following:

(a) Permit the Contractor to continue under this Contract, but make good such deficiencies or complete the Contract by whatever method the District may deem expedient, and the cost and expense thereof shall be deducted from the Contract Price or paid by the Contractor to the District on demand;

(b) If the workmanship performed by the Contractor is faulty or defective materials are provided, erected or installed, then the District may order the Contractor to remove the faulty workmanship or defective materials and to replace the same with work or materials that conform to the Contract Documents, in which event the Contractor, at its sole costs and expense, shall proceed in accordance with the District's order and complete the same within the time period given by the District in its notice to the Contractor; or

(c) Initiate procedures to declare the Contractor a non-responsible bidder for a period of two to five years thereafter.

All amounts expended by the District in connection with the exercise of its rights hereunder shall accrue interest from the date expended until paid to the District at the maximum legal rate. The District may retain or withhold any such amounts from the Contract Price. If the Contractor is ordered to replace any faulty workmanship or defective materials pursuant to Paragraph (b) above, the Contractor shall replace the same with new work or materials approved by the Architect and the District, and, at its own cost, shall repair or replace, in a manner and to the extent the Architect and the District shall direct, all work or material that is damaged, injured or destroyed by the removal of said faulty workmanship or defective material, or by the replacement of the same with acceptable work or materials. In no event shall anything in this Paragraph be deemed to constitute a waiver by the District of any other rights or remedies that it may have at law or in equity, it being acknowledged and agreed by the Contractor that the remedies set forth in this Paragraph are in addition to, and not in lieu of, any other rights or remedies that the District may have at law or in equity.

TECHNICAL SPECIFICATIONS
for the

NC STEM CENTER MODULARS II PHASE B INTERIOR RENOVATIONS

INCLUDES DATA SPECIFICATIONS

SECTION 16740

Riverside Community College District

May 26, 2014

ARCHITECT

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NC STEM CENTER MODULARS II PHASE B INTERIOR RENOVATIONS

INCLUDES DATA SPECIFICATIONS SECTION 16740

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SECTION 01010

SCOPE OF WORK

PART 1 - GENERAL

1.1 SECTION INCLUDES:

A. Work Covered by Contract Documents
B. Work by Others
C. Contractor Use of Premises

1.2 WORK COVERED BY CONTRACT DOCUMENTS:

A. **Work Included:** The work to be performed by contractor shall conform to the requirements of all of Divisions of the Specifications, all sheets in Drawings and other related documents, as well as the General Conditions and includes the furnishing of all supervision, labor, materials, tools, equipment, transportation, plans, and services necessary therefore and incidental thereto to complete the project. The work shall consist of, but not be limited to, the following:

1. This Contractor shall provide and accurately locate all General Construction scope of work for the Project as identified, and all other required materials, equipment, and labor not identified, but necessary to complete this Contractors scope of work.

2. ~~**This Contractor shall provide a $7,500 (Seven Thousand Five Hundered Dollars and no/100) allowance for construction contingencies. This Contractor shall be responsible to document all costs incurred; provide all required documentation within 10 days of all work performed. Such costs shall be reported to the Architect in a timely manner. This allowance shall be listed as a line item on the contractor's schedule of values; a deductive change order will be prepared for any portion of this allowance not used.**~~ **SECTION NOT APPLICABLE**

3. Scope of Work: NC STEM Center Modulars II Phase B Interior Revovations – It is the intent of this contract to provide all work required for the interior remodel of two existing modular buildings on the existing Norco Campus, for the Riverside Community College District. The drawings and specifications are intended to give a general representation of the proposed site work. The following list also gives a general overview of the project and is not intended to be all inclusive. Contractor shall carefully review all drawings and specifications, visit the site(s) and include in their bid all work required to properly execute the project.
    a. Interior demolition of walls, doors, windows, fixtures, etc. as noted.
    b. Infill of existing openings, finish to match existing. (Note: Where exterior walls are removed provide new R-13 batt insulation)
    c. Patch and provide new tacksurface where work affects existing wall surfaces.
    d. Patch and repair / provide new suspended ceilings as required where demolition work affects these areas.
    e. Painting as shown and noted.
    f. Provide new timely doors and frames as noted. Existing hardware sets may be re-used as applicable.
    g. New carpet and base
    h. New vinyl flooring and base
    i. Modify or re-install casework as noted.
    j. Install new exterior roll up counter door.

k. All required electrical, data, and fire alarm work.
l. All required plumbing work for capping and extending utilities.
m. Patch and repair all surfaces affected by construction
n. Final cleanup, removal or spoils, etc.

4. This Contractor shall provide all Division 01 – General Requirements for the Project per the Plans and/or Specification Sections.

5. If, at any time, this Contractor needs to open or move any temporary fencing in order to accomplish his scope of work then he shall be responsible to do so at no additional cost to the District. This Contractor shall secure any opening(s) created in the perimeter fencing by this Contractor at the end of each workday.

6. If this Contractor's scope of work, as a necessary result, includes the discharge of contaminated liquid of any kind, then this Prime Contractor is to comply with BMP's (Best Management Practices) of the SWPPP.

7. This Contractor is required to have an English speaking person on site at all times when crew(s) is working. This person is to be a Superintendent, Foreman, or Leadman that is completely familiar with the Work of the Project.

8. All activities shall be in accordance with District approved Project Schedule. All overtime, double shifts, weekend work, etc., required in order to achieve all milestone dates and the Project Completion date is to be included in this Contractor's base bid.

9. This Contract may require multiple mobilizations and phasing of the Work as required by the Project Schedule or directed by the Architect. All additional mobilizations are to be included in this Contractor's base bid.

10. Continuous housekeeping and daily cleanup of litter and excess building materials is mandatory. This Contractor shall have a trash dumpster on site at all times *while their scope of work is in progress*. Contractor shall daily put debris in own trash dumpster or as directed by the Architect. All trash dumpsters and containers shall be kept free of graffiti at all times. If Contractor fails to perform daily clean up, the Architect shall order that clean up done at the Contractor's expense. This Contractor is to include in his base bid two (2) hours per week (for every week while contractor is onsite performing their scope of work) for a Laborer for the purposes of site cleanup that is to be directed by the Architect.

11. This Contractor is responsible for coordination of and arranging for any and all inspections for their scope of work as required.

12. Failure to address/correct any Item(s) of Concern and/or Deficiency Notice(s), issued by either the Project Inspector of Record or the Project Architect, to this Contractor within thirty (30) days of issuance will be cause for rejection of any Progress Payment Application then or thereafter due until such Item(s) of Concern and/or Deficiency Notice(s) is (are) corrected.

13. Punch list, final clean up, and closeout for this Contractor is to be per the Bid Schedule. All parties agree that failure to meet Project Milestones, delays to Punch List, final clean up, and Closeout, would constitute a delay in project completion and, therefore, entitle the District to withhold and retain potential liquidated damages per the Contract Documents from Contractor's progress payments.

B. **Existing Site and Building Conditions:** The Contractor shall make a thorough examination of the site and all existing buildings to determine all existing conditions affecting the work. Contractor shall be required to submit with their bid the attached site verification form.

C. **Location of Sites:**

- NORCO COLLEGE– RIVERSIDE COMMUNITY COLLEGE DISTRICT

1.3 CONTRACT METHOD:

A. Construct the Work under a single Lump Sum Contract.

1.4 CONTRACTOR USE OF PREMISES:

A. Contractor shall have use of the premises for the execution of the work.

B. Coordinate use of the premises under the direction of the Architect.

C. Assume full responsibility for the protection and safekeeping of products under the Contract that are stored on the site.

D. Move any stored products under Contractor's control that interferes with the operations of the Owner or a separate contractor.

E. Obtain and pay for the use of additional storage or work areas needed for operations.

F. Contractor shall assume all responsibility for parking his own and his subcontractor's vehicles at the direction of the Architect. Contractor shall direct all material deliveries to the construction gate.

G. All District property is tobacco free, drug free, alcohol free, radio free, weapons free and graffiti free. Sleeveless shirts and pets are not permitted. Contractor shall enforce these rules to his crew, subcontractors and suppliers. Upon written direction from the Construction Manger, this Contractor shall immediately provide graffiti removal to ensure compliance with the District's no-graffiti policy.

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.1 SUMMARY:

This section covers the requirements for pre-construction meeting, progress meetings, specially called meetings and post-construction meeting. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 CONTRACTOR'S RESPONSIBILITIES:

1.2.1 Prepare agenda, notify participants, and make physical arrangements for all meetings.

1.2.2 Record minutes, including all significant proceedings and decisions for each meeting. Reproduce and distribute copies of minutes within 5 days after each meeting. Provide copies to the Architect, all other participants in the meeting, and all other parties affected by decisions made at the meeting.

1.3 PRE-CONSTRUCTION MEETING;

1.3.1 Prior to issuance of notice to proceed, a pre-construction meeting will be held at a time and location designated by the Architect.

1.3.2 Attendance: The meeting shall be attended by the Owner's representative, the Owner's Inspector, the Architect and his professional consultants, the Contractor and his superintendent, all major subcontractors and other persons designated by the Owner.

1.3.3 Agenda: The agenda for the meeting shall include the following items as a minimum.

.1 Distribution and discussion of the construction schedule including all critical work sequencing.

.2 Designation of persons authorized to represent and sign documents for the Owner, Architect and Contractor, with examples of official signature of each.

.3 Procedures and forms for processing submittals, field decisions, proposal requests, change orders, applications for payment and revised progress schedules.

.4 Procedures for maintaining record documents.

.5 Contractor's use of premises including location of office, work and storage areas.

.6 Temporary barricades, utilities, sanitary facilities, signs and other temporary facilities required.

.7 Safety and first-aid procedures including designation of Contractors safety officer.

.8 Security procedures.

.9 Housekeeping procedures.

.10 Communication procedures between parties.

.11 List names, addresses and telephone numbers of those persons authorized to act for the Contractor in emergencies.

.12 Construction permit requirements, procedures and posting.

.13 Testing laboratory or agency and testing procedures.

.14 Establish schedule for progress meetings.

.15 Other administrative items as appropriate.

1.4 PROGRESS MEETINGS:

1.4.1 Progress meetings shall be held at the dates and times scheduled at the pre-construction meeting unless changes are agreed to by all parties and appropriate notification of such changes has been given.

1.4.2 Attendance: The meeting will be attended by the Architect, the Contractor's Superintendent and the Owner's Inspector. When requested by the Owner, the Architect or the contractor; subcontractors, and the Architect's Consultants may also attend.

1.4.3 Agenda: The agenda for these meetings will include the following items.

.1 Review progress of work since the previous meeting.

.2 Discuss field observations, problems and conflicts.

.3 Identify problems which impede planned progress and develop corrective measures as required to regain the projected schedule. Revise the progress schedule if necessary.

.4 Review progress scheduled during the next work period.

.5 Review the progress of sub-contractors.

.6 Review changes proposed by the Owner for their effect on the progress schedule and completion time.

1.5 SPECIAL MEETINGS:

Upon appropriate notice to other parties, special meetings may be called by the Owner or Architect, at times agreed to by all parties involved.

1.6 POST-CONSTRUCTION CONFERENCE:

A post-construction conference will be held prior to final inspection of the work to discuss and resolve all unsettled matters. Bonds and insurance to remain in force, and the other documents required to be

submitted by the Contractor will be reviewed and all deficiencies determined. Schedules and procedures for the final inspection process and for the correction of defects and deficiencies shall be discussed and agreed.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

SECTION 01310

SCHEDULES AND REPORTS

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the preparation and submission of the schedules and reports specified herein, including the up-to-date maintenance thereof as required. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 CONSTRUCTION SCHEDULE:

1.2.1 Immediately upon being awarded the Contract and before request for a partial payment, the Contractor shall prepare and submit to the Architect a construction progress schedule. The schedule shall be prepared in chart form according to the Critical Path Method (CPM) with the dates for beginning and completion of each trade and activity included. Computer prepared CPM charts are acceptable. The schedule shall conform to the working time and the time of completion established under the terms of the Contract and shall be subject to modification by and approval of the Owner. When, in the opinion of the Owner, it becomes necessary to accelerate the work, the Contractor, when so ordered, shall modify the schedule to conform to such requirements.

1.2.2 The Construction Schedule shall be continuously updated and, if necessary, redrawn and submitted simultaneously with the application for progress payments. Each revised schedule shall indicate the work actually accomplished during the previous period and the schedule for completion of the remaining work.

1.2.3 A copy of the most recent updated Construction Schedule shall be posted in the Contractor's job office, and copies of all out-of-date schedules shall be kept at the job office at all times for perusal by the Owner.

1.3 SUBMITTAL SCHEDULE:

1.3.1 The Contractor shall also furnish a separate schedule along with the Construction Schedule specified above, showing the proposed dates for submittal of all samples, shop drawings, and product data.

1.3.2 Submit two copies of the submittal schedule to the Architect.

1.4 SCHEDULE OF VALUES:

1.4.1 Immediately upon being awarded the Contract, and before request for payment, prepare and submit to the Architect a Schedule of Values allocated to the various portions of the work. This Schedule of Values, unless objected to by the Architect, shall be used only as the basis for the Contractor's Applications for Payment.

1.4.2 The schedule shall list the installed value of the component parts of the work in sufficient detail to serve as a basis for computing values for progress payments during construction. Follow the table of contents of this Project Manual as the format for listing component items. For each major line item list sub-values of major products or operations under the item, where applicable.

1.4.3 Each item shall include a directly proportional amount of the Contractors overhead and profit.

1.4.4 For items on which progress payments will be requested for stored materials, break down the value into (1) the cost of the materials, delivered and unloaded, with taxes paid, and (2) the total installed value.

1.4.5 The sum of all values listed in the schedule shall equal the total Contract sum.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION (Not Applicable)

* * * * * * *

SECTION 01405

CONTRACTOR SAFETY

A. HEALTH AND SAFETY POLICY

1. The policy of the District is to promote safety at a level to minimize personal injury and potential property damage.

2. Employees of contractors working on this project are required to meet or exceed all established and recognized codes and standards for safety and protection of personnel and property.

3. The safety guidelines included here are made available to you, the Contractor, as an extension of the safety clause in your Contract General Conditions Article 10.

4. These guidelines are not intended to be complete in every detail, but are merely of a general nature. The separate contractors are in no way relieved of their responsibilities for safety of persons and property, and compliance with all statutes, rules, regulations and orders applicable to the conduct of the work.

5. The possession, use, or sale of any alcoholic beverage or illegal controlled drug substance will not be permitted on or immediately adjacent to the job site by any contractor, contractor employee, subcontractor employer or associate.

6. The abuse of prescribed medication will not be permitted on or immediately adjacent to the job site by any contractor, contractor employee, subcontractor employee or associate.

7. This Contractor, and other contractors, share the responsibility of monitoring and enforcing, as necessary, A.5 and A.6 above. Any known, (or with due cause believed to be), violator of A.5 or A.6 shall be immediately reported to the Construction Manager.

8. The District reserves the right to take corrective action, as deemed in the best interest of the project and the District, for violation of any health or safety standard. This corrective action may include, but is not limited to; removal (from the job site) any unsafe tools/equipment, temporary work stoppage for any unhealthy or unsafe condition, immediate removal (from the job site) any person that is unwilling or incapable of conducting themselves in a manner that promotes a healthy and safe working atmosphere. Any person found to be repeatedly in violation of health and/or safety standards will be permanently removed from the site.

B. RESPONSIBILITIES

1. The District demands that all project contractors perform in a reasonable and safe manner.

2. The contractors working on this project have the ultimate and total responsibility to conduct a sound accident control program as it pertains to their work and their employees, as well as to ensure safe working conditions for employees of other contractors.

3. The Contractor will ensure his employees cooperate with and coordinate safety matters with other contractors to form a joint safety effort.

4. Employees who have been, or will be exposed to excessive (measured against applicable standards) levels of toxic materials or harmful physical agents shall be notified by the

Contractor. Notice of corrective action being taken shall be provided to the employees. Accurate records must be kept of all exposures which are required to be monitored under the State and Federal Codes.

5. In the event of a defense by the Contractor against unsafe independent employee actions, the Appeals Board requires that you must show evidence of the following:

   a. That the employee was experienced in the job being performed;

   b. That you as the employer have a well devised safety program which includes training employees in safety matters relating to their individual job assignments;

   c. That you effectively enforce your safety program;

   d. That you have and enforce a policy of sanctions against employees who violate your safety program; and

   e. That the employee caused a safety infraction which he or she knew was in violation of your safety requirement.

C. SAFETY ACTIVITIES

1. Contractors will conduct or initiate:

   a. Safety program as required by current State of California requirements.

   b. Weekly "tool box" safety meetings between Contractor and Contractor's supervisors, foremen, employees, and subcontractors working on the project; and

   c. Weekly safety inspections of your work area and those areas of work under your responsibility or shared responsibility as well as taking any other necessary safety precautions.

D. REPORTS

1. Submit all preliminary, periodic and special reports to the General Contractor. The Sub Contractor is in no way relieved of the requirements for submission of reports to any agency or authority.

   a. All reports listing deficiencies, accidents, or injuries shall show corrective action taken.

   b. A weekly status and summary report of each "tool box" meeting held and items discussed.

   c. A weekly status report of inspection results. The attached status forms are for your convenience only.

   d. A continuing list of deficiencies found, date identified, responsible party, corrective action and date corrected.

   e. Accident reports and injury forms. Submit a copy of one of the following to the General Contractor for each case:

1) California Division of Labor Statistics and Research Form 5020 (latest rev.), or;

2) Federal OSHA Form 101, or;

3) Insurance Company form similar to 1 or 2 above.

f. A copy of CAL/OSHA Form 200 "Log and Summary of Occupational Injuries and Illness."

2. Special Reports

a. Notify the General Contractor immediately of any accident involving injury to personnel or property; and complete written reports within 24 hours of a death or injury of five (5) or more employees as a result of one accident.

b. Copies of all toxic or harmful agent reports (See paragraph B.4.)

3. Governmental Reports

a. Notification of governmental authorities is the responsibility of each affected contractor.

E. SAFETY DEFICIENCY CORRECTION

1. All safety deficiencies will be corrected by contractors in accordance with the following priorities.

a. Immediate correction of items with any probability of major or minor injury to people.

b. Correction immediately of any accident probability which could involve people and/or equipment.

c. Correction within one day (or sooner) of potential injury or damage to property.

F. OUTSIDE SAFETY INSPECTIONS

1. Unannounced inspections by city, state or federal safety agencies or insurance companies may occur.

a. Sub Contractors are to escort representatives of these agencies or companies directly to the General Contractor and assist him as required or directed.

b. If the General Contractor is not available, the Sub Contractor's foreman or representative shall accompany the inspector on the inspection.

G. INVESTIGATING

1. All injuries are to be investigated by the contractors and reported.

2. The General Contractor shall be notified prior to proceeding with an investigation.

H. SAFETY STANDARDS AND CODE

1. All contractors are to provide their job supervision with applicable safety code publications and ensure they are familiar with the contents.

2. Occupation Safety and Health Administration Standards (latest applicable edition) on the designated applicable safety standards.

3. In states with OSHA approved plans, state codes will take precedence unless federal standards are more stringent, in which case federal standards shall apply.

4. On General Services Administration (GSA) projects, applicable sections of the GSA Manual Accident & Fire Prevention on Construction and Alteration Work will apply in addition to all other codes and standards.

5. All code and standard conflicts will be resolved by applying the most restrictive code and/or standard.

6. Suggested references for contractors are:

a. Safety & Health Regulation for construction, U.S. Department of labor, OSHA, Volume 37, No. 243.

b. Construction safety orders, State Standard, CAL/OSHA, state of California, latest edition.

c. GSA Manual - GSA -PBSP 5900.3.

d. U.S. Army Engineering Manual - BM 385-1.

e. Accident Prevention, Associated General Contractors.

f. A Short Guide to the California Occupational Safety and Health Act. -National Federation of Independent Business, 150 West 20th Avenue, San Mateo, California 94403.

I. REQUIRED NOTICES: TO BE VISIBLY DISPLAYED

1. Workers' Compensation Insurance Notice

2. OSHA poster: Safety and Health Protection on the job.

3. State of California Department of Human Resources: Notice to Employees Unemployment Insurance - Disability Insurance.

4. Hard Hat Area Signs.

5. List of ambulances, doctors and hospitals with telephone numbers which can be called during an emergency.

6. Name and title of the safety representative from each contractor's organization.

7. Any other safety signs, slogans, etc. that will improve the general awareness of a joint safety program.

J. PERMITS

1. Permits from the Division of Industrial Safety are required before contractors may undertake the following kinds of work:

   a. Construction of trenches or excavations which are 5 feet or more deep, into which a person is required to descend;

   b. Construction of any building, structure, falsework, or scaffolding more than three stories high.

   c. Demolition of any building, structure, falsework, or scaffolding more than three stories high.

2. The Division of Industrial Safety may investigate or confer with the employer before the start of work. If a pre-job safety conference between the Division of Industrial Safety personnel and the employer is a requirement specified by the Division of Industrial Safety at the time the permit is issued, employees or their representatives are to be included at the conference.

3. Permits must be posted at or near each place of employment requiring a permit. If posting at the actual job site is not possible, the permit must be available for inspection at all times at the site, or, in the case of a mobile unit, at the employer's head office in the area.

4. Additional permits may be required from the Division of Industrial Safety or other applicable governmental agencies. It is the responsibility of each contractor to determine, procure, and pay for their own such permits.

SAFETY STATUS FORMS

THIS REPORT IS TO SERVE AS A MINIMUM STANDARD GUIDELINE AND DOES NOT INCLUDE JOB OR TRADE SPECIFIC ITEMS OR CONDITIONS. SAID ITEMS OR CONDITIONS SHOULD BE ADDED BY CONTRACTOR ON THE LAST PAGE ENTITLED "COMMENTS AND REMARKS".

#:	*QUESTION / CHECK LIST COMMENT:*	*YES*	*NO*	*N/A*
A.	**FIRE PROTECTION AND PREVENTION:**			
1.	Are all flammable liquid containers clearly identified?			
2.	Are all flammable liquid containers UL or FM listed?			
3.	Have proper storage practices for flammables been observed?			
4.	Have the proper type & adequate number of fire extinguishers been observed at the job site?			
5.	Are extinguishers readily accessible and serviced regularly?			
6.	Are hydrants clear and accessible for Fire Department personnel?			
B.	**ELECTRICAL**			
1.	Are all switch gear, panels, and devices that are energized marked and / or guarded to prevent accidental contact?			
2.	Are lockout devices available and used on all circuits and equipment that could become energized while work is being performed?			
3.	Are all temporary circuits properly guarded and grounded?			
4.	Are all extension cords in continuous lengths without splices or tape?			
5.	Are GFCI's being used? If not, is Assured Equipment Grounding Conductor Program being followed?			
6.	If temporary lighting is provided, are bulbs protected against accidental breakage?			
7.	Are there a sufficient number of temporary outlets on the job site?			
8.	Are there any visual signs of outlet overloading?			
C.	**HAZARD COMMUNICATION**			
1.	Does the Hazard Communication Program include a list of hazardous chemicals?			
2.	Does the Hazard Communication Program include container labeling?			
3.	Does the Hazard Communication Program include "Material Safety Data Sheets" (MSDS)?			
4.	Does the Hazard Communication Program include employee training?			
5.	Does the Hazard Communication Program include personal protective equipment (PPE)?			

#:	QUESTION / CHECK LIST COMMENT:	YES	NO	N/A
6.	Does the Hazard Communication Program include emergency response procedures, information, & phone numbers?			
7.	Does the Hazard Communication Program include a list of hazards for non-routine tasks?			
8.	Does the Hazard Communication Program include procedures for informing other contractors of hazardous conditions and / or procedures?			
9.	Does the Hazard Communication Program include adequate posting of signage & warning labels?			
10.	Is a copy of the Hazardous Communication Program at this job site?			
D.	**EXCAVATION / TRENCHING**			
1.	Have utility companies been notified of proposed excavation work (one-call system)?			
2.	Are overhead utility lines noted and precautions taken to avoid contact by cranes, backhoes, or other heavy equipment?			
3.	Is the excavation inspected daily or more frequently when there is a change in weather or environment that could affect the soil?			
4.	If needed, are barricades, stop logs, etc. properly located?			
5.	Are excavations five (5) feet or deeper correctly sloped, benched, shored, or is a trench box (shield) used?			
6.	Is a ladder or other means of exit (egress) provided in trenches or excavations four (4) feet or deeper?			
7.	When ladders are used, do they extend three (3) feet above the surface and are they secured?			
8.	Are shoring and shielding systems inspected daily by a competent person?			
E.	**SCAFFOLDING**			
1.	Are scaffold components visibly free of any physical damage (no bent supports or cross bracing)?			
2.	Is scaffolding properly erected with all pins and braces in place and locked?			
3.	Are rolling scaffolds equipped with locking wheels?			
4.	Are wheels locked when scaffold is in use?			
5.	Is scaffold erected on a firm and substantial surface?			
6.	Is planking of a scaffold grade?			
7.	Is planking in good condition and properly installed?			

#:	QUESTION / CHECK LIST COMMENT:	YES	NO	N/A
8.	Are toeboards and guardrails in place on scaffolds over 10 feet?			
9.	Are workers on scaffolding protected from falling objects if overhead hazards exist?			
10.	Is a ladder provided for access to scaffold work platform?			
F.	**BARRICADING**			
1.	Are floor openings planked and secured or barricaded?			
2.	Is a flag person provided to direct traffic when needed?			
3.	Are open excavation, road drop offs, manholes, & uneven surfaces barricaded?			
G.	**LADDERS**			
1.	Is the proper ladder for the job being used?			
2.	Are ladders in good condition (no missing or broken rungs, etc.)?			
3.	Is there a need for and / or are there safety shoes / cleats on the bottom of ladders?			
4.	Are non-conductive ladders available for use around live wiring?			
5.	Are ladders tied-off at top or otherwise secured?			
6.	Do side rails extend 36 inches above the top of the landing?			
7.	Are step ladders fully opened when in use?			
H.	**PERSONAL PROTECTIVE EQUIPMENT**			
1.	Is hearing protection available for personnel that may be exposed to noisy conditions?			
2.	Is respiratory protection available to personnel and is it being used when conditions require same			
3.	Are safety harnesses, belts, lifelines, and lanyards available and being used?			
4.	Are personnel using gloves when handling sharp or rough material?			
I.	**MEDICAL**			
1.	Are first-aid kits available and properly stocked?			
2.	Are all emergency phone numbers posted?			
3.	Are all employees aware of the address of the site or capable of giving proper directions to emergency personnel?			
4.	Is anyone trained in first-aid and CPR?			

#:	QUESTION / CHECK LIST COMMENT:	YES	NO	N/A
J.	**TOOLS: (hand & power)**			
1.	Are tools free of any obvious physical damage?			
2.	Are tools inspected for frayed and damaged cords?			
3.	Are tools and cords properly grounded and are ground pins in good condition?			
4.	Are the handles on all tools in good condition (not bent, splintered, or broken)?			
5.	Are all hoses on air or hydraulic tools in good condition?			
6.	Are all shields and guards in place on the tools and in good condition?			
7.	Has each tool and / or equipment operator received proper operating and safety instruction for each tool and / or piece of equipment which he or she is using?			
8.	Has each user of a powder actuated tool been properly certified and are their certifications current?			
K.	**WELDING AND CUTTING**			
1.	Welding goggles / helmet, gloves, and clothing being used by each welder			
2.	Inspection for fire hazards after welding stops			
3.	Are gas cylinders, hoses, regulators, torches, torch tips, and welding carts in good working order and are same being properly secured?			
L.	**HOIST, CRANES, AND DERRICKS**			
1.	Are cables and sheaves checked?			
2.	Are slings hooks, eyelets, and chokes inspected?			
3.	Are load capacities posted in cab?			
4.	Are power lines at a safe distance?			
5.	Are crane inspection logs with crane?			
M.	**FLOOR, WALL OPENINGS, STAIRWAYS**			
1.	Are floor and roof openings guarded by properly constructed guardrails or a properly reinforced and secured cover?			
2.	Are open-sided floors and platforms six feet or more above the ground guarded with a properly constructed railing?			
3.	Are stairs with four or more risers equipped with standard hand rail construction?			
4.	Are runways four feet or more above the ground properly guarded?			

CONTRACTOR SAFETY - "COMMENTS & REMARKS"

1.

SECTION 01700

CONTRACT CLOSEOUT

PART 1 - GENERAL

1.1 SUMMARY:

The work includes performing all operations necessary for and properly incidental to closing out the project and assisting in Owner's final inspection as hereinafter specified. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

1.2 REQUIREMENTS PREPARATORY TO FINAL INSPECTION:

1.2.1 All temporary facilities shall be removed from the site.

1.2.2 The building and site shall be thoroughly cleaned as specified in Section 01710.

1.2.3 All plumbing and mechanical equipment shall operated quietly and free from vibration. Properly adjust, repair, balance, ore replace equipment producing objectionable noise or vibration in the occupied areas of the building. Provide additional brackets, bracing, other methods to prevent objectionable noise or vibration. All systems shall operate without humming, surging, or rapid cycling.

1.2.4 All operating instructions for equipment shall be properly mounted and posted as specified in their respective sections.

1.2.5 Record (As-built) drawings shall be completed, signed, and submitted to the Architect as specified under Article 1.4 of this section.

1.2.6 The Material and Equipment maintenance instructions, as specified in the body of the Specifications, shall be submitted to the Architect.

1.2.7 All guarantees and warranties shall be submitted to the Architect as specified in the General Conditions.

1.3 FINAL INSPECTION:

1.3.1 After all requirements preparatory to the final inspection have been completed as hereinbefore specified, Contractor shall notify the Architect to perform the final inspection. Notice shall be given at least three (3) working days in advance of the time the final inspection is to be performed.

1.3.2 The Contractor or his principal superintendent, authorized to act in behalf of the Contractor, shall accompany the Architect and Owner on the final inspection tour, as well as principal subcontractors that the Architect or Owner may request to be present.

1.3.3 If the work has been completed in accordance with the Contract Documents, and no further corrective measures are required, the Owner will accept the Project and will file for the Notice of Completion.

1.3.4 If the work has been substantially completed in accordance with the Contract Documents, and only minor corrective measures are required, the Architect will prepare a punch list of work to be corrected and the Owner will conditionally accept the Project and will file for the Notice of Completion based upon the

Contractor's assurance that the corrective measures will be completed within the shortest practicable time period.

1.3.5 If the work has not been substantially completed in accordance with the Contract Documents, and several corrective measures are still required, the Owner will not accept the Project or file for the Notice of Completion. Instead, a punch list will be prepared, based on the information gathered from the final inspection, and the Contractor will be required to complete this work and then call for another final inspection, following the procedure outlined above.

1.3.6 Upon acceptance of the Project by the Owner, Contractor shall submit his request for the final and acceptance payment. Final payment will not be made by the Owner, however, until thirty-five (35) days after filing for the Notice of Completion.

1.4 RECORD DRAWINGS (AS-BUILT DRAWINGS):

1.4.1 The Contractor shall provide Record Drawings which shall clearly show all differences between the contract work as drawn and as installed for all concealed work, as well as work added to the contract which is not shown on the Contract Drawings.

1.4.2 Concealed shall mean work installed underground or in an area which cannot be readily inspected by use of access panels, inspection plates or other removable features.

1.4.3 The Contractor shall maintain a set of Record Drawings at the job site. These shall be kept current and legible, and shall be available for inspection at all times by the Architect. Show all changes in the contract work, or work added on the Record Drawings in a contrasting color.

1.4.4 At the conclusion of work, the Contractor shall purchase from the Architect, at the cost of reproduction, one set of vellum or mylar reproducibles. The Contractor shall employ a competent draftsperson to incorporate all record data in a clear and legible and reproducible manner.

1.4.5 In showing changes in the work, or added work, use the same legends that are used on the Contract Drawings. Indicate exact locations by dimensions and exact elevations. Give dimensions from a permanent reference point. Prepare all changes to scale.

1.5 OPERATION AND MAINTENANCE DATA SUBMITTAL:

1.5.1 The Contractor shall submit to the Owner for approval, five (5) copies of complete operation and maintenance data as specified herein and in other sections of these specifications. Data shall be submitted a minimum of thirty (30) days prior to completion of the contract. The contract shall not be considered complete until this data has been reviewed by the Owner.

1.5.2 Assemble all data required herein, except that to be mounted in frames, in three-ring loose-leaf binders, complete with index, index dividers, and permanently attached exterior label on cover.

1.5.3 Data Required:

.1 Manufacturer's Manuals: Complete installation, operation, maintenance and service manuals, and printed instructions and parts lists for all materials and equipment where such printed matter is regularly available from the manufacturer. This includes, but is not limited to such service manuals as may be sold by the manufacturer covering the operation and maintenance of his items, and complete replacement parts lists sufficiently detailed for parts replacement ordering to manufacturer. Bound publications need not be assembled in binders.

.2 Equipment Nameplate Data: A typewritten list of all mechanical and electrical equipment showing all equipment nameplate data exactly. Identify equipment by means of names, symbols, and numbers used in the contract documents.

.3 System Operating Instructions: Typewritten instructions covering operation of the entire system as installed (not duplicating manufacturer's instructions for operating individual components). Include schematic flow and control diagrams as appropriate and show or list system valves, control elements, and equipment components using identification symbols and numbers. List rooms, area of equipment served, and show proper settings for valves, controls, and switches.

.4 System Maintenance Instructions: Typewritten instructions covering routine maintenance of system. List each item of equipment requiring inspection, lubrication, or service and briefly describe such maintenance, including types of lubricants and frequency of service. It is not intended that these instructions duplicate manufacturer's detailed instructions. Give name, address and phone number of nearest firm authorized or qualified to service equipment or provide parts.

.5 Wall-Mounted Data: Frame one set of typewritten system instructions and diagrams as required under Paragraphs .3 and .4 above, covered with glass and mounted in locations as directed by the Owner. This set of instructions is in addition to the five required hereinbefore.

1.6 INSTRUCTION OF OWNER'S MAINTENANCE PERSONNEL BY THE CONTRACTOR:

1.6.1 After work under this contract is completed, tested and prior to acceptance, and not less than five (5) days after submittal of the operation and maintenance data required in Paragraph 2.6, the Contractor shall operate all systems for a period of three 8-hour days during which time he shall keep on the project a competent man or men familiar with the items installed whose full-time assignment will be to instruct the Owner's maintenance personnel in the operating and maintenance of the equipment and systems.

1.6.2 Any instructions from manufacturer's representatives required under other sections of this specification shall be conducted during this period. This instruction period shall not be conducted prior to completion of all piping and equipment labeling required by the contract.

1.6.3 All arrangements and notices for operation and instruction periods shall be made through the Owner.

1.6.4 This three-day instruction period shall be in addition and subsequent to any period of operation, test and adjustment called for elsewhere in this specification.

1.7 MANUFACTURERS'WARRANTIES

1.7.1 Deliver all the manufacturers' warranties required by the Contract Documents, with Owner named as the beneficiary. In addition, for all equipment and machinery, or components thereof, bearing a manufacturers' warranty that extends for a longer time period than the Contractor's warranty, secure and deliver the manufacturers' warranties in the same manner.

1.7.2 Form of Warranty: Written warranties, except manufacturers' standard printed warranties, shall be on the Contractor's, subcontractor's, material supplier's, or manufacturer's own letterhead, addressed to the Owner. All warranties shall be submitted in duplicate, and in the form shown on the following page, modified as approved to suite the conditions pertaining to the warranty.

1.7.3 Submission of Warranties: Collect and assemble all written warranties into a bound booklet form, and deliver them to the Owner's Counsel for final review and approval.

SECTION 01710

CLEANING AND CLEANUP

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing of all labor, materials, equipment, and services, and performing all operations necessary for, and properly incidental to, cleanup during construction and final cleaning of the building prior to acceptance by the Owner, including waxing and polishing as specified herein and in other sections when specified. The Conditions of the Contract and the other sections of Division 1 apply to this section as fully as if repeated herein.

PART 2 - PRODUCTS

2.1 MATERIALS:

Use only cleaning materials which will not create hazards to health or property and which will not damage materials. Use only cleaning materials and methods recommended by the manufacturer of the surface material to be cleaned. Use cleaning materials only on surfaces recommended by the cleaning material manufacturer.

PART 3 - EXECUTION

3.1 CLEANUP DURING CONSTRUCTION:

3.1.1 It is required that the entire site be kept in a neat and orderly condition, and the Architect may, at any time during construction, order a general cleanup of the site as a part of the work under this section.

3.1.2 Dispose of waste, trash, and debris in a safe, acceptable manner, in accordance with applicable laws and ordinances and as prescribed by authorities having jurisdiction. Bury no such waste material and debris on the site. Burning of trash and debris on the site will not be permitted.

3.1.3 Location of dump for trash and debris and length of haul is the Contractor's responsibility.

3.2 FINAL CLEANING OF BUILDING

Prior to final inspection by the Architect and after all construction work is essentially complete, thoroughly clean the building, utilizing professional building cleaners. Items to be cleaned include, but are not limited to; all glass, plastic, doors, opening frames, grilles, trim, exposed non-ferrous metal surfaces, floor covering, light fixtures and plates, plumbing fixtures and trim, and all finish surfaces throughout the construction. Thoroughly remove ink trademarks from laminated plastic surfaces. Vacuum-clean the building and remove all spots, smears, dust, debris, hand prints and defacements of every sort, including those of vandals. Follow the recommendations of the manufacturer of the materials and items to be cleaned for all cleaning, polishing, and treatment such as waxing.

3.3 FINAL SITE CLEANUP:

Also prior to final inspection, thoroughly clean the entire site and put it into a neat, acceptable condition. Remove from the entire site all construction waste and unused materials, dunnage, loose rock and stones, excess earth, roots, weeds, and all debris of any description resulting from the work. Hose down and scrub

where necessary all new concrete and asphalt pavement and walks dirtied as a result of the work. Thoroughly remove mortar droppings from concrete walks and other pavements.

* * * * * * *

SECTION 01800

DEMOLITION AND ALTERATIONS

PART 1 - GENERAL

1.1 SUMMARY:

The work includes performing all operations in connection with demolition work as shown and noted on the drawings and as specified. The General Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 STANDARDS:

Except as modified by governing codes and regulations and the requirements specified herein or details on the drawings, demolition work shall conform to the following standards:

1.2.1 Safety Code for Building Construction ANSI A.10.2

PART 2 - SPECIAL CONSIDERATIONS

2.1 SCHEDULING:

2.1.1 Before commencing any alteration or demolition work, submit for review by the Architect and approval by the Owner, a schedule showing the commencement date, the order, and the completion dates for the various parts of work.

2.1.2 Before starting any work relating to existing utilities (electrical, sewer, water, heat, gas, fire lines, etc.) that will temporarily discontinue or disrupt service to the existing building or adjoining facilities, notify the Architect and Owner 72 hours in advance and obtain the Owner's approval in writing before proceeding with this phase of the work.

2.2 PROTECTION:

2.2.1 Make such explorations and probes as are necessary to ascertain any required protective measures before proceeding with demolition and removal. Give particular attention to shoring and bracing requirements so as to prevent any damage to existing construction.

2.2.2 Provide, erect, and maintain catch platforms, lights, barriers, weather protection, warning signs, and other items as required for proper protection of the workmen engaged in demolition operations, occupants of the building, public and adjacent construction.

2.2.3 Provide and maintain weather protection at exterior openings so as to fully protect the interior premises against damage from the elements until such openings are closed by permanent work.

2.2.4 Provide and maintain temporary protection of the existing structure designated to remain where demolition, removal, and new work is being done, connections made, materials handled, or equipment moved.

2.2.5 Take necessary precautions to prevent dust and dirt from rising by wetting demolished masonry, concrete, plaster, and similar debris. Protect unaltered portions of the existing building affected by the operations under this section by dustproof partitions and other adequate means.

2.2.6 Provide adequate fire protection in accordance with local fire department requirements.

2.2.7 Do not close or obstruct exitways, walkways, passageways, or stairways without authorization of the Owner and local fire department. Do not store or place materials in passageways, stairs or other means of egress. Conduct operations with a minimum traffic interference.

2.2.8 Be responsible for any damage to the existing structure or contents as a result of insufficient protection provided.

PART 3 - EXECUTION

3.1 WORKMANSHIP:

3.1.1 Demolition, removal, and alteration work shall be as shown on the drawings. Perform such work required with due care, including shoring, bracing, etc. Be responsible for any damage that may be caused by such work to any part or parts of existing structures or items designated for reuse. Perform patching, restoration, and sections of the specifications.

3.1.2 Materials or items designated to become the property of the Owner shall be as shown on the drawings. Remove such items with care and store them in a location at the site to be designated by the Owner.

3.1.3 Materials or items designated to be reinstalled shall be as shown on the drawings. Remove such items with care under the supervision of the trade responsible for reinstallation; protect and store until required. Replace material or items damaged in its removal with similar new material.

3.1.4 Materials or items demolished and not designated to become the property of the owner or to be reinstalled shall become the property of the contractor and shall be removed from the owner's property.

3.1.5 Execute the work in a careful and orderly manner, with the least possible disturbance to the public and to the occupants of the building.

3.1.6 In general, demolish existing work in small sections. Where necessary to prevent collapse of any construction, install temporary shores, struts, or bracing.

3.1.7 Where alterations occur, cut, remove, patch repair, or refinish the adjacent surfaces or so much thereof as is required by the involved conditions, and leave in as good a condition as existed prior to the commencing of the work. The materials and workmanship employed in the alterations, unless otherwise shown or specified, shall be performed by the various respective trades that normally perform the particular items of work.

3.1.8 Finish adjacent existing surfaces as specified for new work. Clean existing surfaces of dirt, grease, loose paint, etc., before refinishing.

3.1.9 Where existing equipment and/or fixtures are indicated to be reused, repair such equipment and/or fixtures and refinish to put in perfect working order. Refinish as directed.

3.1.10 Cut out embedded anchorage and attachment items as required to properly provide for patching and repair of the respective finishes.

3.1.11 Confine cutting of existing roof areas designated to remain to the limits required for the proper installation of the work. Cut and fold back existing built-up roofing. Cut and remove insulation, etc. Provide

temporary weathertight protection as required until roofing and flashings are installed. Consult the Owner to ascertain if existing guarantee bonds are in force and execute the work so as not to invalidate such bonds.

3.2 NOISE CONTROL:

3.2.1 All motorized equipment on the site, including hauling trucks, shall be equipped with sound control devices at all times. The sound level measured at a distance of 25 feet from any piece of equipment shall not exceed 60 decibels.

3.2.2 Materials shall be lowered in fully enclosed chutes acoustically lined to maintain the sound level within the limits prescribed above.

3.2.3 Workmen's voice communication shall be kept under control at all times.

3.3 CLEANING UP:

Remove all debris as the work progresses. Maintain the premises in a neat and clean condition.

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SECTION 05990

MISCELLANEOUS METALS

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing and installing of all miscellaneous metal work and related connections complete as shown and noted on the drawings and specified. The General Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES:

The editions referenced herein of Federal Specifications (Fed. Spec.) and of the other standards and specifications published by the following organizations, apply to the work only to the extent specified by the reference.

1.2.1 American National Standards Institute

1.2.2 American Institute of Steel Construction (AISC).

1.2.3 American Society for Testing and Materials (ASTM).

1.2.4 American Welding Society (AWS).

1.2.5 National Association of Architectural Metal Manufacturer's (NAAMM).

1.2.6 Uniform Building Code.

1.3 SUBMITTALS:

1.3.1 Shop Drawings:

.1 Submit fully detailed shop drawings of all miscellaneous metal work giving sizes; details of fabrication and construction; methods of assembly and bracing; and locations of hardware, anchors, and all accessories.

.2 Drawings shall include all shop and erection details, including cuts, copes, connections, holes, bolts and welds. All welds, both shop and field, shall be indicated by standard welding symbols in AWS D1.1-81. Drawings shall show the size, length and type of each weld. All materials to be brazed or soldered shall have connections indicated by symbols which are industry standards.

.3 Contractor shall be responsible for all fabrication and for correct fitting of mental members shown on shop drawings. No materials shall be fabricated or delivered to the site until the shop drawings have been approved and returned to the Contractor.

1.4 FIELD MEASUREMENTS AND TEMPLATES:

Secure all field measurements required for proper and adequate fabrication and installation of the work. Furnish templates for exact location of items to be embedded in concrete and masonry and setting instructions required for all installation.

1.5 DELIVERY AND STORAGE OF MATERIALS:

Deliver material in time to insure uninterrupted progress of the work. Materials shall be stored in a manner to preclude damage and permit ready access for inspection and identification of each shipment. Steel materials, either plain or fabricated, shall be stored above the ground upon platforms, pallets, skids, or other supports. Materials shall be kept free from dirt, grease, and other foreign matter, and shall be protected from corrosion. Materials showing evidence of damage will be rejected and shall be immediately removed form the work.

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 Steel, Rolled Shapes, Bars and Plates: Standard structural sections, conforming to ASTM A36-90.

2.1.2 Galvanized sheet steel: Conform to ASTM A446-89, grade D.

2.1.3 Steel pipe: Conform to ASTM A53-90a, Schedule 40

2.1.4 Steel tubes: Conform to ASTM A501-89 or A500-90, grade B, and shall be seamless tube.

2.1.5 Anchors, Bolts, and Fastenings: Bolts and nuts shall conform to ASTM A307-90, Grade A and ASTM A563-90.

2.1.6 Electrodes: All arc-welding electrodes shall conform to AWS A5.1-78 or A5.5-69 E60XX or E70XX.

2.1.7 Shop primer for steel, other than galvanized, shall meet Federal Specification TT-P-86G, Type III (red lead) or TT-P645 (zinc chromate).

2.1.8 Treatment for damaged galvanized surfaces shall be Galvalloy, Galvicon or Drygalv or equal.

2.1.9 Pipe Sleeves: Pipe sleeves through concrete walls and footings shall be standard weight, wrought iron, mild steel, or cast iron sleeves with not less than 1/2 inch space all around between the sleeve and pipe.

2.1.10 Steel Grating: Grating shall be smooth surface welded steel grating with 2 inch by 3/16 inch bearing bars. Cross bars shall be spaced 4 inches on center. Grating shall be galvanized. Design grating to support 100 pounds per square foot. Brodhead Steel Products, Blaw-Knox or equal.

2.1.11 Galvanizing: Zinc coating shall conform to ASTM A123-89a. Zinc coating for threaded products shall conform to ASTM A153-82.

2.1.12 Quick setting hydraulic cement shall be one of the following or equivalent approved by the Architect.

.1 "Por-Rok" as manufactured by Hallemite/Lehn and Fink.

.2 "Thorogrip" as manufactured by Thoro Systems Products.

.3 "Masterflow 713" as manufactured by Master Builders.

2.2 FABRICATION:

2.2.1 Materials shall be fabricated and assembled in the shop to the greatest extent possible. Shearing, flame cutting, and chipping shall be done carefully and accurately. Coordinate all connection details to concrete or masonry. Verify all lines, levels, and dimensions, where possible, just prior to commencing fabrication of connection details. Correct any work that does not fit. Schedule and coordinate work under this section with that specified elsewhere in order to produce a workmanlike installation. When not otherwise shown or specified, comply with all applicable requirements of AISC "Specifications for Design, Fabrication and Erection of Structural Steel for Buildings". Finished surfaces of all exposed members shall be smooth and free of any markings, burrs, or other defects.

2.2.2 Connections shall be bolted, brazed or welded as indicated. One-sided or other types of eccentric connections will not be permitted unless shown in detail and approved on the shop drawings.

2.2.3 Holes shall be cut, drilled, or punched at right angles to the surface of the metal and shall not be made or enlarged by burning. Holes in base or bearing plates shall be drilled. Holes shall be provided in members to permit connecting the work of other trades.

2.2.4 Steel Pipe Handrails:

.1 Handrails for stairs and ramps shall be have an outer diameter of 1-1/2" and mounted 1-1/2" clear from side walls.

.2 Construct handrails of steel pipe, size as shown on the drawings.

.3 Join posts, rails and corners by fitting posts to top rails, fitting intermediate rails to posts, mitering corners, groove welding joints and grinding smooth. No sharp or abrasive corner edges or surfaces. Wall surfaces adjacent to handrail shall be smooth.

.4 Railing splices shall be butted and reinforced by tight interior sleeve not less than 6 inches long.

.5 Railings may be bent at corners in lieu of mitering and welding provided bends are made in suitable jugs and pipe is not crushed.

.6 Shop fabricate handrails in as large sections as practicable.

.7 Shop prime interior handrails and hot dip galvanize exterior handrails.

2.2.5 Miscellaneous rolled steel plates and shapes shall be provided for corner guards, sills dock leveler pit edge angles, mechanical equipment supports and other locations indicated or required to complete the work.

2.2.6 Guard Posts (pipe bollard): Guard posts shall be galvanized extra heavy weight (Schedule 80) steel pipe set in a concrete foundation and filled with concrete. Concrete shall be 2000 psi.

PART 3 - EXECUTION

3.1 GENERAL REQUIREMENTS:

3.1.1 General: All steel and miscellaneous metal work shall conform with the applicable requirements of the hereinbefore referenced "Codes and Standards". All details shown are typical. Similar details apply to similar conditions. Drawings shall be checked with the architectural drawings for dimensions, elevation, size, and location of all installations. All miscellaneous metal items shall be supplied in ample time for incorporation in the work. Include all reinforcing angles, plates, straps, brackets, hangers, clips, lugs, holes, sleeves, shims, etc., as shown or required for erection of steel and miscellaneous metal work and as required to complete the work as shown on the drawings.

3.2 WELDED CONNECTIONS:

3.2.1 All welders shall be certified qualified welders. All welders welding light gauge mental shall be qualified for light gauge metal welding.

3.2.2 Welded connection shall be made in strict accordance with AWS D1.1-79. All welding shall be done in the shop unless otherwise shown or specified.

3.2.3 All welds and other connection exposed in the finished work shall be ground and dressed smooth and so that the shape and profile of the item welded is preserved.

3.3 INSTALLATION:

3.3.1 Miscellaneous metal items shall be installed as rapidly as the progress of other work will permit. Splices and field connections shall be made with bolts, except where welding or brazing is indicated or approved on the shop drawings. Fasteners shall be installed as specified hereinafter.

3.3.2 Metal work shall be set accurately at the established lines and levels. Installation shall be in strict accordance with approved drawings and actual condition, true and horizontal or perpendicular as the case may be, level and square with angles and edges parallel with related lines of the building.

3.3.3 Anchor bolts, anchors, block-outs and sleeves shall be properly located and built into connecting work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

3.3.4 Pipe Handrails: Railings shall be installed in concrete by means of pipe sleeve inserts set and anchored in the concrete. Posts shall be inserted into pipe sleeves, plumbed and aligned. The annular space between pipe posts and sleeve inserts shall be filled with quick setting hydraulic cement.

3.4 GALVANIZED FINISH:

Touch up all damaged galvanized finish due to installation, welding, threading or other work with treatment specified herein.

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SECTION 06100

ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing and installing of all finish carpentry work as shown and noted on the drawings and as specified herein. The General Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 QUALITY ASSURANCE:

1.2.1 Requirements of Regulatory Agencies.

.1 Rough carpentry shall conform to the California Code of Regulations (CCR) Title 24 Part2, California Building Code, Chapter 23A.

.2 Framing anchors shall be furnished and installed in accordance with the manufacturer's current I.C.B.O. Research Committee Report.

1.2.2 Grade Marks:

.1 Identify lumber by the official grade mark of WCLIB, WWPA or RIS.

.2 Identify plywood by the official grade mark of APA.

.3 Identify pressure treated lumber and plywood with the official grade mark of AWPB.

1.3 REFERENCE STANDARDS:

The editions of the specifications and standards referenced herein, published by the following organizations, apply to the work only to the extent specified by the reference.

1.3.1 American Wood Preservers Bureau (AWPB).

1.3.2 U.S. Department of Commerce (USDC).

1.3.3 West Coast Lumber Inspection Bureau (WCLIB).

1.3.4 Western Wood Products Association (WWPA).

1.3.5 Redwood Inspection Service (RIS).

1.4 SUBMITTALS:

Submit copies of the framing anchor manufacturer's current I.C.B.O. Research Committee Report.

1.5 PRODUCT DELIVERY STORAGE AND HANDLING:

Deliver, store and handle materials in a manner to protect them from damage or deterioration due to excessive moisture or other conditions that would adversely affect their serviceability.

1.5 COORDINATION:

Cooperate with other trades in coordinating their work with the work of this section. Provide wood grounds, blocking and nailers where indicated or as required for integration of work of other trades into the structure.

PART 2 - PRODUCTS

2.1 LUMBER:

2.1.1 Moisture content at time of placing:

.1 Untreated lumber shall not exceed 19 percent.

.2 Treated lumber shall not exceed 19 percent after pressure treatment.

2.1.2 Sizing and Surfacing: Sizes indicated are nominal; actual sizes shall be in accordance with USDC PS20-70. Exposed surfaces of wood members shall be surfaced smooth except as indicated otherwise.

2.1.3 Grades and Species: Provide lumber of the grades and species listed below for the various purposes, graded in accordance with WCLIB "Standard Grading and Dressing Rules No. 17", 1996 Edition, WWPA "Western Lumber Grading Rules 95" or RIS "Standard Specifications for Grades of California Redwood Lumber" 1984 Edition.

.1 Sill Plates, Cants, Roof Nailers and Roof Curbs: Standard or No. 1 grade, any species, pressure preservative treated.

.2 Sills on concrete No. 1 Douglas Fir (Pressure preservative treated).

.3 Blocking, Nailers, Top Plates and Bracing: Construction or No. 2 grade, Douglas Fir or larch.

.4 Studs and Headers: No. 1 Douglas Fir, larch.

.5 Joists, Stair Stringers and Ledgers: No. 1 Douglas Fir or larch.

.6 Posts, Columns and Beams: No. 1 Douglas Fir or larch except appearance grade where exposed to view.

2.2 PLYWOOD:

2.2.1 Plywood shall conform to USDC PS 1-83 types and grades as listed below for various purposes.

.1 Wall Roof Sheathing: APA Structural I, Exposure I, thickness as indicated on drawings.

.2 Backing Board for Electrical and Telephone Equipment: Exterior Type B-D grade, 3/4 inch thick.

2.3 PRESSURE PRESERVATIVE TREATMENT:

Lumber indicated on the drawings or specified herein to receive pressure preservative treatment shall be treated to provide a net retention of 0.25 lb.s per cu. ft. with one of the waterborne salt treatments listed below or equal. After treatment, lumber and plywood shall be kiln dried to a moisture content of 19 percent less.

J.H. Baxter and Co. "Chemonite"
Koppers Co. Inc. "Wolman CCA"
Osmose Wood Preserving Co. "K-33"

2.4 BUILDING PAPER:

One of the following fully waterproof Kraft paper products or equal.

Fortifiber Corp. "Orange Label Sisalkraft"
Ludlow Corp.
Rickdraft

2.5 ROUGH HARDWARE:

2.5.1 Furnish items of rough hardware, connections, bolts, required to complete the work. Nails, bolts, nuts, washers and other fasteners exposed to the exterior shall be hot-dipped galvanized.

.1 Nails: Common wire round head. Use ring-shank or spiral shank nails for floor sheathing. See drawings for special nailing requirements.

.2 Bolts: Standard mild steel, square or hexagonal head machine bolts with matching nuts and cut washers as indicated.

.3 Lag Bolts and Screws: Sizes shown or noted on drawings.

.4 Toggle Bolts: Sizes shown or noted on drawings.

.5 Powder Driven Fasteners: Provide one of the following fastener systems complete with all necessary washers, nuts and other appurtenances.

Powder Power Tool Corp. "Drive-It"
Ramset Fastening Systems
Hilti Fastening Systems

.6 Framing Connectors: Provide galvanized steel joist hangers and other framing anchors having the minimum design and load capacities shown on the drawings. Load capacities shall be those shown in manufacturer's current ICBO Research Committee Report.

Simpson Co. "Strong Tie"
K.C. Metal "Superspeed Connectors"
Silver Metal Products Inc.

2.6 MISCELLANEOUS ITEMS:

Rough carpentry work and miscellaneous items and their related components are not necessarily individually described. The most important features and those requiring detail description are mentioned. Rough carpentry work and miscellaneous items not mentioned or described shall be furnished or installed in accordance with the intent of the drawings and specifications and as required to complete the work.

PART 3 - EXECUTION

3.1 GENERAL:

Before commencing work, check all lines and levels indicated and such other work as has been completed. Do not proceed until discrepancies have been corrected or adjusted.

3.2 CONSTRUCTION AND WORKMANSHIP:

3.2.1 Install wood framing, making proper provisions for work of other trades. Do framing of wood required to accommodate plumbing, heating and ventilating, electrical, and other trades. Fit neatly around exposed items, such as outlet boxes, conduit, pipes, and ducts.

3.2.2 Wall Framing:

.1 Plates for partitions and walls shall be single at bottom and double at the top, except as otherwise detailed. Splices in top plates shall be staggered not less than 48" except as otherwise shown on drawings. Where plates are cut for passing pipes and similar items, they shall be reinforced on both sides with 12 ga. x 1-1/2" x 18" steel plates punched for eight 16d nails.

.2 Plates of exterior and interior shear walls shall be anchored to concrete foundations with fasteners of size, length and spacing indicated. Unless otherwise shown, plates for other partitions shall be anchored to concrete floors with 0.156" dia. by 3-1/8 long powder driven fasteners spaced not to exceed 32 inches apart. Powder driven fasteners are prohibited adjacent to depressions or in curbs.

.3 Furnish and set columns and studding of size, spacings, and locations indicated on drawings. Unless noted otherwise, studding for furring and partitions shall be 2" x 4" set 16" on center. Cripples shall be run to floor plates. Studding over 8'-0" tall shall be blocked at half height, double-nailed at each end. Construct corners and intersections with not less than 3 studs.

.4 Frame openings with double jamb studs and headers of sizes indicated. Set headers on jamb studs and nail securely.

.5 Provide diagonal bracing for exterior walls except where walls are covered with plywood sheathing or siding. Brace walls at each external corner with 1" x 4" wood let into studs or metal bracing extending at a 45 degree angle over top and bottom plates.

3.2.3 Joist Framing: Joists shall be set with the crowning edge up with minimum 1-1/2" bearing on wood or metal supports. Where openings occur, headers and supporting joists shall be doubled and headers and tail joists shall be hung on metal hangers.

.1 Framing system and sizes shall be as shown. Solid blocking shall be at ends and over supports. Provide 2 x 3 cross-bridging, metal bridging or solid blocking in spans where shown on drawings or at 10'-0" on centers in spans over 10'-0" where not indicated.

.2 Install joist hangers where shown using nails of sizes and types listed in manufacturer's I.C.B.O. report.

.3 Include furring or stripping, properly shimmed and leveled, where shown or required for ceiling finishes.

3.2.4 Rafter Framing: Set rafters accurately to form a true plane. Notch rafters to provide full bearing on plates.

.1 Provide headers and trimmers around openings in the roof. Headers and trimmers carrying or supporting two or more rafters shall be doubled.

3.2.5 Furring, blocking, and backing shall be furnished and installed where required for reception of wallboard, formation of architectural features, concealment of pipes, conduits, ducts, attachment of supports for toilet room accessories, building specialties, and other fixtures. Consult with the trades concerned and set furring and blocking required. Include fire retardant treated wood blocking for drywall partitions and walls where shown or required.

3.2.6 Dressed wood grounds shall be furnished and installed where required for securing trim or other finish. Set grounds rigid, true, and in perfect alignment. Nail grounds to wood members and secure to concrete with nailing blocks or plugs or expansion type anchors. Provide wood stripping where indicated or required for the attachment of finish materials to wood, concrete, or other surfaces.

3.2.7 Fire blocking shall be installed as shown on drawings and where required by the California Building Code.

3.2.8 Openings shall be provided for mechanical and electrical equipment, ducts, and other equipment. Where one or more joists are cut, the joists supporting the trimmers shall be doubled and well spiked. Where continuation of three or more joists is interrupted, the abutting headers and joists shall be reinforced with approved type of joists hangers.

3.2.9 Frame openings in walls required for the installation of cabinets and other wall hung items, including telephone and electrical terminals, stair handrails, shelves, toilet partitions, fixtures and equipment.

3.2.10 Install wall, and roof sheathing as shown on structural drawings. Subflooring and sheathing shall have solid bearing under all edges. Sheets shall laid up with 1/16" space between sheets at ends and 1/8" space at edge joints. Inspect roof sheathing carefully as soon as it is laid to determine its adequacy to support workmen and the normal loads which it will receive. Protect roof sheathing from weather until roofing is installed by applying building paper or polyethylene sheeting.

3.2.11 Secure approval of Architect before cutting, drilling or notching wood members that may weaken the member. Lay out framing so that structural members will not require cutting for openings, pipes, vents or ducts.

3.3 LUMBER FASTENINGS:

3.3.1 Nailing and bolting of wood members shall conform to the minimum requirements of the "Title 24, California Code of Regulations", Chapter 25, and as specified herein and shown on the structural drawings.

3.3.2 Bolting: Bolts shall be stamped stock machine bolts as specified. Bolts shall be all square or hexagonal head with matching nuts. Bolted connections shall be retightened before final acceptance or, in case of bolted connections in concealed locations, immediately before the area is sealed off.

3.3.3 Nailing: Connections shall be as called for on the drawings or in table 25-Q of the CCR, where not shown on drawings. Nails shall be untreated steel for interior work and concealed framing, and galvanized for all exposed work on exterior. Unless connections are detailed or steel connectors indicated, nails shall not be driven closer together than 1/2 of their length no closer to the edge of a member than 1/4 their length. When wood tends to split with size of nail used, predrill holes for nails. Penetration of nails or spikes into pieces shall be not less than one-half the length of the nail or spike.

3.3.4 Washers: Provide all bolts and lag screws bearing on wood with cut washers except where malleable iron or plate washers are shown on structural drawings.

3.3.5 Metal Framing Connectors: Install connectors in accordance with the manufacturer's current I.C.B.O. Research Report.

3.4 ROUGH HARDWARE:

Furnish and install all stock items of rough hardware as indicated or required, including clips, anchors, hangers, bolts, ties and plates for connecting wood framing members to wood, concrete, steel, except as specified to be provided under other Sections.

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SECTION 06200

FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing and installing of all carpentry and related millwork items, as shown and noted on the drawings and as specified. The General Conditions, Changes to the General Conditions Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS:

1.2.1 Shop Drawings: Submit fully detailed shop drawings of all casework and shelving specified herein for review. Shop drawings shall be prepared in accordance with the Woodwork Institute of California's Manual of Millwork, Section 1 entitled "Millwork Shop Drawings". No fabrication or work shall be commenced until shop drawings have been reviewed and returned to the Contractor.

.1 Stamp the Shop Drawings with the WIC "Certified Compliance Grade Stamp" certifying that the cabinet work will be manufactured in accordance with the WIC grade specified.

1.2.2 Samples: Submit samples of plastic laminate in colors selected for approval.

1.2.3 Submit catalog information and illustrations for cabinet hardware for approval.

1.3 HANDLING:

Carefully store all lumber and millwork delivered to the site off the ground in a manner to assure proper drainage, ventilation and protection from dampness.

1.4 GENERAL REQUIREMENTS:

Cooperate with other trades in coordinating their work with the work of this section. Provide all wood grounds, blocking and nailers where indicated or as required for integration of work of other trades into the structure.

PART 2 - PRODUCTS

2.1 GENERAL REQUIREMENTS:

2.1.1 Moisture content at time of placing:

.1 Untreated lumber shall not exceed 19 percent.

.2 Treated lumber shall not exceed 19 percent, kiln dry after pressure treatment.

.3 Plywood shall not exceed 15 percent.

2.1.2 Pressure preservative treatment: AWPA Standards, using chromated zinc chloride or Wolman Salt (Tanalith). Touch-up parts made raw by cutting or drilling.

2.2 FINISH MATERIALS:

2.2.1 All finish materials under this Section shall conform in every respect to the applicable requirements for "Custom Grade" of the Manual of Millwork of the Woodwork Institute of California, the West Coast Lumbermen's Association, the National Hardwood Lumber Association and the American Plywood Association.

2.2.2 Hardwood shall be red oak except as otherwise noted. Exposed members shall be selected for grain and appearance. Warped members shall not be used. Verify location of all hardwood items.

2.3 LUMBER:

2.3.1 All plates, blocking, backing, and nailers shall be douglas fir-larch No. 2 or Stud grade. Lumber in contact with concrete or masonry shall be pressure treated.

2.4 PLYWOOD:

2.4.1 Backing plywood shall be Douglas fir C-D Interior.

2.4.2 Telephone and Electrical backboards shall be Douglas fir B-D Exterior.

2.4.3 All other plywood, except shelving, shall be Douglas fir Structural I.

2.5 ROUGH HARDWARE:

2.5.1 Furnish all items of rough hardware, connections, bolts, etc., required to complete the work. Bolts, nuts, and washers shall be hot-dipped galvanized, conforming to ASTM A153-80.

2.5.2 Nails, bolts, washers, nuts, wood screws, lag screws, etc. shall be best suited for their specific condition. Nails shall be steel, common or finished, as required, galvanized when used in exterior conditions or with redwood. Miscellaneous hardware, including metal fittings, where used in exterior conditions and where exposed to the weather, excepting nails, shall be cadmium plated, unless noted otherwise on the Drawings.

2.5.3 Bolts: Standard mild steel, square or hexagonal head machine bolts with matching nuts and cut washers, or carriage bolts with square nuts and cut washers as indicated.

2.6 SHELVING AND STORAGE ITEMS:

2.6.1 Plywood for fixed or adjustable shelving shall be DFPA-INT., A-B, 3/4" or 1" thick as noted. All exposed edges shall have hardwood edge band.

.1 Adjustable shelf standards shall be KV #80, or equal.

.2 Adjustable shelf brackets shall be KV #180, or equal, of length required.

.3 Mop racks, hooks, etc., where indicated on the drawings shall be by KV, Stanley, or equal.

2.7 MISCELLANEOUS ITEMS:

2.7.1 Rough and finish carpentry work and miscellaneous items and their related components which are to be furnished and/or installed under this section are not necessarily individually described. The most

important features and those requiring detail description are mentioned. Rough and finish carpentry work and miscellaneous items not mentioned or otherwise described shall be furnished and/or installed in accordance with the intent of the drawings and specifications and as required to complete the work.

.1 Hardwood trim shall conform to section 10 of the WIC Manual of Millwork for Custom grade, for transparent finish. Material shall be red oak.

2.8 CASEWORK:

2.8.1 Manufacture plastic laminate faced cabinet work in accordance with WIC Manual of Millwork, Section 15, Casework - Laminated Plastic or Decorative Polyester Overlay Covered, Custom Grade, except as modified herein.

2.8.2 Manufacture countertops in accordance with WIC Manual of Millwork, Section 16, Laminated Plastic Counter Tops, Splashes, and Wall Paneling, Custom Grade.

2.8.3 Modifications to WIC Manual:

.1 Plastic Laminate: NEMA LD3 for the following:

a. Horizontal Surfaces: NEMA General Purpose Type, nominal 0.050 inch thick.

b. Vertical Surfaces: NEMA Vertical-Surface Type, nominal 0.028 inch thick.

c. Cabinet Liners: NEMA Cabinet-Liner Type, nominal 0.020 inch thick.

d. Backing Sheets: Manufacturer's standard backing sheet, nominal 0.020 inch thick.

e. Surface Finish: Satin finish, color as selected from manufacturer's full range of colors and patterns.

2.8.4 Counter Tops and Splashes: Plastic Laminate covered, meeting the Custom Grade requirements of WIC, Section 16, with coved top to splash joints and exposed edges and ends self-edged, unless otherwise detailed.

2.8.5 Drawer Boxes: Provide with sub-fronts and applied finish fronts securely fastened, with square corners and self edged. Provide drawers with metal slides except as noted otherwise.

2.8.6 Doors: Flush overlay type, hinged to swing flat against the face of adjoining cabinet or the side of cabinet, with square corners, and self-edged. Do not notch door or cabinet ends, or divisions to receive hinge.

2.8.7 Shelves: 3/4 inch thick for spans up to 35 inches and 1 inch thick for spans over 35 inches up to 48 inches, and adjustable to 1 inch centers. Do not recess metal shelf standards into the end panels; notch shelving to clear standards.

2.8.8 Cabinet Interiors, including faces and edges of shelving therein, and interior door faces: Finish with cabinet liner.

2.8.9 Toe Kick Base: Furnished and installed under section 09650.

2.8.10 Cabinet Hardware:

.1 Hinges: Heavy duty wrap-around offset for overlay doors with non-removable pin; flat black or dull chrome finish.

.2 Pulls: U Shaped surface mounted wire aluminum, US 28 finish, and one of the following, or equal:

Quality #812
Stanley #4483-1/2

.3 Catches:

a. Doors without locks: Magnetic type and one of the following, or equal:

National Lock No. 61-570
Stanley No. 41

.4 Drawer Slides: Full extension with no deflection, 1/2" slide space, 100 pound load capacity.

.5 Adjustable Shelf Standards: One of the following, or equal:

Knape & Vogt No. 255 x 256
Grant No. 125 x 21

.6 Door and Drawer Locks: Corbin, drawer lock No. 0738, door lock No. 0737 for single doors and active leaf of pairs of doors. Provide 2 keys for each lock.

.7 Metal Strike Plates: Provide cabinet door and drawer locks with metal strike plates.

PART 3 - EXECUTION

3.1 GENERAL:

Before commencing work, check all lines and levels indicated and such other work as has been completed. Should there be any discrepancies, report same in writing to the Architect for correction or adjustment. In event of failure to do so, be responsible for correction of any errors.

3.2 QUALITY ASSURANCE:

3.2.1 All work herein specified, shall be executed by skilled journeymen craftsmen, experienced in the trade, with the proper, sharp tools and in conformity with these documents. Verify all dimensions in the field and all related conditions before starting the work. Inform the Architect of any conflict between locations and conditions of this work and work of others for correction or adjustment. In event of failure to do so, be responsible for correction and any errors.

3.3 INSTALLATION:

3.3.1 Furring, blocking, and backing shall be furnished and installed where required for formation of architectural features, attachment of supports for building specialties, telephone equipment and other fixtures. Consult with the trades concerned and set furring and blocking they require. Fire-retardent treated wood shall be used for blocking, furring and backing.

3.3.2 All trim shall be fixed in place in full lengths, without piecing, except where use of single lengths would be impractical. Butt joints, if necessary, shall be beveled. Miter all exterior angles. Interior angles of

molded parts shall be coped. All exposed nails shall be set for putty with the use of proper setting tool. Where work of this section adjoins and/or abutts work of others, a neat, tight, properly scribed joint shall be the result.

3.3.3 Wherever possible, all materials herein specified shall be worked to completion, in the shop. All parts of fabricated items shall be delivered to the site in as few pieces as possible.

3.3.4 Members which indicate checking or warping shall be rejected. Poor grain combinations shall also be rejected on parts which are to be exposed in the work.

3.3.5 Installation of all assembled items in the work shall be done carefully and neatly. Scribe as required for tight, straight fit. Do not force installation. Shim as required for straight, level and plumb finished surfaces.

3.3.6 Priming and backpainting: Priming and/or backpainting of all finished wood surfaces concealed after installation shall be as specified herein or as required under Section 09900. All priming and backpainting requirements shall be performed before such products are installed in the work. Receive proper inspection of all surfaces before any additional work is started. Laminated casework does not require backpriming.

3.3.7 Protect all parts from injury after installation in the work and maintain said protection until completion of the entire project.

3.4 ROUGH HARDWARE:

furnish and install all stock items of rough hardware as indicated or required, including clips, anchors, hangers, bolts, ties, and plates for connecting wood framing members to wood, concrete, masonry, or steel, except as specified to be provided under other sections.

3.5 INSTALLATION OF CASEWORK:

3.5.1 Install and anchor all casework work to preclude overturning. Install plumb, level, true and straight with no distortions. Shim as required using concealed shims. Scribe and cut for accurate fit.

3.5.2 Unless otherwise indicated attach casework with #10 cadmium plated ovalhead screws and finish washers at 16 inches on centers.

3.5.3 Install without distortion so that doors and drawers fit openings and are accurately aligned.

3.5.4 Install finish hardware after all finish work has been completed. Inspect drilling operations for surface splinters or delaminations. Pieces bearing such imperfections will be rejected.

3.6 CLEAN-UP:

Take all necessary action to keep this work clean and free of dirt, trash, obstruction and equipment, except that necessary for the proper completion of this work. Materials not used, shall be removed immediately. Dirt and trash shall be cleaned out daily and final clean-up shall leave the work in a thoroughly clean and acceptable condition.

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SECTION 07920

SEALANTS AND CAULKING

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1. The work includes the furnishing and installing of sealant work required to weatherproof the buildings, and including interior sealant work. This section contains requirements pertaining to all weather and interior sealing throughout the project and becomes a part of each and every section calling for sealing and caulking unless otherwise specified, as though written in full in each section.

1.1.2 The General Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES:

The editions of American Society for Testing Materials (ASTM) Standards referenced herein apply to the work only to the extent specified by the reference thereto.

1.3 SUBMITTALS:

1.3.1 Product Data: Submit copies of manufacturer's specifications, recommendations and installation instructions for each type of sealant and related material required.

.1 Include manufacturer's letter of certification, or certified test reports indicating that each material complies with the requirements specified herein and is suitable for the applications indicated. Indicate the transmittal that a copy of each instruction has been forwarded to the installer.

.2 Include manufacturer's letter of certification indicating that sealants, primers and cleaners comply with regulations controlling use of volatile organic compounds.

1.3.2 Samples: Submit samples indicating the color range available for each sealant material intended for installation in locations exposed to view. Materials installed before approval of color will be subject to removal and replacement with approved material.

1.3.3 Submittal procedures and quantities are specified in Section 01300.

1.4 QUALITY ASSURANCE:

1.4.1 Manufacturer's Qualifications: Obtain joint sealants from a single manufacturer for each different product required. Obtain elastomeric sealants only from manufacturers who will, if required by the Architect, send a qualified technical representative to the project site to advise the installer of proper procedures and precautions for the use of these materials.

1.4.2 Installer's Qualifications: Employ a firm having a minimum of 5 years successful experience in the application of the type materials required.

1.4.3 Regulatory Requirements. The quantity of volatile organic compounds (VOC) used in sealants, primers and cleaners shall not exceed the limits permitted under the current regulations for architectural coatings of the South Coast Air Quality Management District.

1.5 DELIVERY, STORAGE AND HANDLING:

1.5.1 Deliver sealants to the site in unopened containers, labeled with the manufacturer's name, brand designation, color, expiration period for use, pot life curing time, and mixing instructions for multi-component materials.

1.5.2 Store sealants in an area where they will not be subject to temperatures above 100 degrees F or below 40 degrees F. Do not store materials that have exceeded the manufacturer's recommended shelf life.

1.6 JOB CONDITIONS:

Do not apply sealants when the ambient temperature is above 100 degrees F or below 40 degrees F or when weather is foggy, or rainy.

1.7 WARRANTY:

In addition to the warranty and correction of work requirements of the General Conditions, work under this section shall be warranted against moisture penetration for a period of 5 years from the date of "Notice of Completion". The written warranty shall include materials and labor required to repair leaks that develop. The warranty shall be signed by the sealant manufacturer, the sealant installer and the Contractor and shall be submitted in accordance with Section 01700.

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 Type A Sealant: Multiple component, self-leveling polyurethane based sealant meeting the requirements of ASTM C-920Ä87, Type M, Grade P, Class 25. Acceptable products, or equal:

Mameco International; "Vulkem 245"
Pecora Corp.; "Urexpan NR-200"
Sika Corp.; "Sikaflex-2C-SL"
Sonneborn Building Products; "Sonolastic SL 2"

2.1.2 Type B Sealant: Single or multiple component, nonsag polyurethane based sealant meeting the requirements of ASTM C-920A98, Type S or M, Grade NS, Class 25. Do not use single component sealants when excessive movement is expected within the curing time of the sealant. Acceptable products, or equal:

Mameco International; "Vulkem 116 or 227"
Pecora Corp.; "Dynatrol I or II"
Sika Corp.; "Sikaflex 1A or 2C-NS"
Sonneborn Building Products; "Sonolastic NP 1 or NP 2"
Tremco; "Dymonic or Dymeric"

2.1.3 Type C Sealant: Butyl rubber based sealant meeting the requirements of ASTM C-920Ä98, Type S, Grade NS, Class 7.5. Acceptable products, or equal:

Adco Seal; "No. B-100"
Pecora Corp.; "BC-158"
PTI Sealants; "PTI 757"
Tremco; "Butyl Sealant"

2.1.4 Type D Sealant: Latex acrylic based sealant meeting the requirements of ASTM C834-95. Acceptable products, or equal:

Pecora Corp.; "AC-20"

Sonneborn Building Products; "Sonolac"
Tremco; "Acrylic Latex 834"

2.1.5 Type E Sealant: Low modulus silicone sealant meeting the requirements of ASTM C-920Ä98, Type S, Grade NS, Class 50. Acceptable products, or equal:

Dow Corning Corp.; "No. 795"
General Electric Co.; "Silpruf"
Pecora Corp; "864 Silicone"
Sonneborn Building Products; "Sonolastic Omniseal"
Tremco; "Spectrem 2"

2.1.6 Type F Sealant: Narrow joint seam sealant meeting the requirements of AAMA 800-92 and formulated for sealing joints 3/16 inch or smaller in width. Acceptable products, or equal:

PTI Sealants; "PTI 200"

2.1.7 Acoustical Sealant: Sealant shall be one of the following at the Contractors option.

.1 Polyvinyl chloride foam tape with pressure sensitive adhesive on one side 3/4 inch wide by the thickness required to accommodate unevenness of substrates and completely fill openings between partition framing and building floors and concrete or masonry wall. Acceptable products, or equal:

Norton Co.; "Norseal V730 Series"
Arlon; "Series 6A"

.2 Permanently resilient compound manufactured specifically for acoustical applications. Acceptable products, or equal:

Pecora; "BA-98"
Tremco; "Acoustical Sealant"
Ohio Sealants; "Sound Calk (Solvent Type)"

2.1.8 Colors: Provide custom colors as selected by the Architect. In general, colors shall be as follows:

Concrete flatwork - to match concrete.
Concrete walls - to match concrete.
Masonry walls - to match mortar color.
Aluminum to concrete - to match concrete.
Aluminum to aluminum - to match aluminum color.
Ceramic tile - to match grout.
Vinyl Composition Tile - to match adjacent metal door jamb.
Other locations - to match color of adjacent surface.

2.2 MISCELLANEOUS MATERIALS:

2.2.1 Joint Filler: Preformed, compressible, resilient, nonstaining polyurethane, open or closed cell non-outgassing foam, round in shape, with diameter never less than 30% greater than width of joint. Sealant manufacturer shall guarantee filler as being suitable for its intended use and entirely compatible with the sealant.

2.2.2 Primer, as required: Product of manufacturer of sealant used.

2.2.3 Lacquer Sealer: Clear, as recommended by sealant manufacturer.

2.2.4 Bond Breaker Tape: shall be polyethylene tape or other tape as recommended by the sealant manufacturer. Provide self-adhesive tape wherever applicable.

PART 3 - EXECUTION

3.1 EXAMINATION:

Examine the joint surfaces, backing, and anchorages of units forming sealant rabbet, and the conditions under which the sealant work is to be performed for conditions that would adversely affect the performance of the sealant. Do not proceed with the sealant work until unsatisfactory conditions have been corrected. Start of sealant work constitutes acceptance of conditions.

3.2 SURFACE PREPARATION:

3.2.1 Surface Cleaning of joints: completely clean joints and spaces to be sealed of all dirt, dust, mortar, oil, and other foreign materials which might adversely affect the joint sealing work. Where necessary, degrease with an solvent or commercial degreasing with an approved solvent or commercial degreasing agent. Surfaces shall be thoroughly dry before application of sealants.

.1 If recommended by manufacturer, remove paint and or other protective coatings from surfaces to be sealed prior to priming and application of sealants.

.2 Prepare surfaces to receive sealant to conform to the sealant manufacturer's specifications. Use air pressure or other approved methods to achieve required results. Use masking tape to keep sealants off surfaces that will be exposed in the finished work.

3.2.2 Joint Priming: Prime joint substrates where recommended by joint sealant manufacturer. Apply primer to comply with joint sealant manufacturers' recommendations. Confine primers to areas of joint sealant bond; do not allow spillage or migration onto adjoining surfaces.

3.3 JOINT DIMENSIONS:

3.3.1 Butyl-Base Type Sealant: Minimum joint width of 1/4 inch, and depth of three times the width of the joint, with the maximum depth 3/4 inch.

3.3.2 Silicone Rubber, Acrylic and Polyurethane Sealant: Minimum joint width shall be 1/4 inch, and the depth shall be approximately one-half the width, but in no case less than 1/4 inch. Other width-to-depth ratios shall conform to the following:

IF JOINT WIDTH is:	JOINT DEPTH shall be:	
For Non-Porous Surfaces:	Minimum	Maximum
1/4" (minimum)	1/4"	1/4"
1/4" to 1/2"	1/2 of width	Equal to width
over 1/2"	NOT PERMITTED	
For porous Surfaces:		
1/4" (minimum)	1/4"	1/4"
1/4" to 1/2"	1/4"	Equal to width

1/2" to 1"	1/4"	Equal to width
Over 1"	NOT PERMITTED	

3.4 SEALANT APPLICATION SCHEDULE:

3.4.1 Type A Sealant: Use for all joints in exterior and interior concrete and ceramic tile floors and paved surfaces subject to foot traffic.

3.4.2 Type B Sealant: Use for all vertical joints in masonry, plaster and concrete, exposed on the exterior of the building and for sealing around metal door, window and louver frames penetrating these surfaces.

3.4.3 Type C Sealant: Use for interior wall penetrations for pipe or conduit that will be concealed by escutcheons or other trim or plates and for lap joints in sheet metal work.

3.4.4 Type D Sealant: Use for joints, voids, and penetrations in interior surfaces exposed to view and requiring painting.

3.4.5 Type E Sealant: Use for all joints in contact with organically coated aluminum.

3.4.6 Type F Sealant: Use for all narrow joints in aluminum storefront framing where joints are mechanically restricted from movement.

3.4.7 Acoustic Sealant: Use to seal all perimeter joints around sound retardant partitions and around electrical boxes and other penetrations in these partitions.

3.5 APPLICATION:

3.5.1 Installation of Sealant Filler: Install sealant fillers to provide support for sealants during application and at position required to produce the cross-sectional shapes and depths of installed sealants relative to joint widths as specified herein and to allow optimum sealant movement capability.

.1 Do not leave gaps between ends of joint filler.

.2 Do not stretch, twist, puncture, or tear joint fillers.

.3 Remove absorbent joint fillers that have become wet before sealant application and replace with dry material.

.4 Install bond breaker tape between sealants where backer rods are not used between sealants and joint fillers or back of joints.

3.5.2 Install sealants in compliance with the details, square and perpendicular to the adjoining surfaces. Rounded off finishing will not be allowed.

3.5.3 Seal around all openings in exterior walls, and other locations indicated or required for waterproofing the buildings. Seal all other joints as herein specified, indicated, and required to properly complete the building(s).

3.5.4 Apply sealants using specified materials and proper tools. Prepare surfaces (cleaning, etc) and apply sealant as specified herein and in accordance with the manufacturer's printed instructions and recommendations.

3.5.5 Do not use sealants when they become too jelled to be discharged in a continuous flow from the gun. Modification of sealants by addition of liquids, solvents or powders will not be permitted.

3.5.6 Apply sealants with guns having proper size nozzles. Use sufficient pressure to fill all voids and joints solid. In sealing around openings, include entire perimeter of each opening, unless indicated or specified otherwise. Where the use of the gun is impracticable, use suitable hand tools.

3.5.7 Neatly point sealed joints on flush surfaces with beading tool. Remove excess material. Sealant, where exposed, shall be free of wrinkles and uniformly smooth. Complete sealing before final coats of paint are applied.

3.6 MISCELLANEOUS JOINT AND SEALING WORK:

The entire extent of sealing work is not necessarily fully or individually described herein. Sealing shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to drawings for conditions and related parts of the work.

3.7 CLEANING:

Clean surfaces of all materials adjoining sealed joints of any smears of sealant or other soiling due to sealant application.

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SECTION 09250

GYPSUM BOARD

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 Section Includes: Gypsum board construction complete with accessories.

1.1.2 Related Documents: The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.1.3 Related Work:

.1 Load-bearing steel framing is specified in Section 05120.

.2 Ceiling framing and furring is specified in Section 09100.

.3 Non-load-bearing steel framing is specified in Section 09100.

1.2 REFERENCES:

The editions referenced herein of specifications and standards published by the following organizations, apply to the work only to the extent specified by the reference. Refer to Section 01091 for information concerning availability and use of references.

American Society of Testing and Materials (ASTM)
Gypsum Association (GA)
Western Lath/Drywall Industries Association (WLPDIA)

1.3 SUBMITTALS:

1.3.1 Product Data: Submit product data for each type of product specified.

1.3.2 Certificates: Submit manufacturer's certification that products meet or exceed requirements of the referenced specifications.

1.3.3 Submittal procedures and quantities are specified in Section 01340.

1.4 QUALITY ASSURANCE:

1.4.1 Gypsum Board Construction: Meet the requirements of the California Code of Regulations (CCR) Title 24 Part 2, California Building Code, Chapter 25A, Gypsum Board and Plaster

1.4.2 Fire-Resistive Construction: Meet the requirements of CCR Title 24 Part 2 Chapter 7, Fire Resistant Materials and Construction. Provide fire-resistance rated assemblies identical to those in Chapter 7 of the CCR Title 24 Part 2 or in listing of other testing agencies acceptable to the State Fire Marshal.

1.4.3 Fire Resistive Gypsum Board: Bear the Underwriter's Laboratories Inc.(UL) label or label of another organization to the State Fire Marshal.

1.5 DELIVERY, STORAGE, AND HANDLING:

1.5.1 Deliver gypsum board and accessories in the manufacturer's original unopened containers, bundles or rolls bearing the manufacturer's name and brand designation.

1.5.2 Store materials inside the building or in other dry weathertight enclosure. Stack gypsum board flat and off the floor. Do not stack long lengths over shorter lengths.

1.5.3 Store flammable adhesives away from fire, sparks and smoking areas.

1.5.4 Handle gypsum board to prevent damage to edges, ends, and surfaces.

1.6 PROJECT CONDITIONS:

1.6.1 Maintain temperature range between 55 degrees F and 70 degrees F for a period extending from 24 hours before installation until the permanent heating system is in operation. Provide ventilation during and following adhesive and joint treatment application. Use temporary air circulators in enclosed areas lacking natural ventilation.

1.6.2 Do not apply gypsum board until insulation, pipes, conduits, ducts, vents, supports and other items that will be concealed by the gypsum board have been inspected, tested and approved by the governing authorities and unsatisfactory conditions have been corrected.

PART 2 – PRODUCTS

2.1 MATERIALS:

2.1.1 Gypsum Board: Conform to the following standards.

.1 Regular Gypsum Board: ASTM C 36-85(1988), with tapered edges, 5/8 inch thick unless otherwise indicated.

.2 Fire Retardant Gypsum Board: ASTM C 36-85(1988), Type X, with tapered edges, 5/8 inch thick unless otherwise indicated.

.3 Foil Backed Gypsum Board: ASTM C 36-85(1988) with tapered edges, 5/8 inch thick unless otherwise indicated.

.4 Water Resistant Gypsum Board: ASTM C 630-90 with tapered edges, 5/8 inch thick unless otherwise indicated.

.5 Fire Retardant, Water Resistant Gypsum Board: ASTM C 630-90, Type X, with tapered edges, 5/8 inch thick unless otherwise indicated.

.6 Fire Retardant Backing Board: ASTM C 442-84a(1988), Type X, with square edges, 5/8 inch thick unless otherwise indicated.

.7 Fire Retardant Gypsum Sheathing: ASTM C 79-87 , Type X, with square edges, 5/8 inch thick, minimum size 4'-0" x 8'-0" as manufactured by Gold Bond, National Gypsum "Fire-Shield Jumbo Gypsum Sheathing" or equal.

2.1.2 Screws: Conform to the standards specified below for attaching gypsum board to the various

substrates listed.

.1 Metal Framing, 20 Gage and Heavier: ASTM C 954-86.

.2 Metal Framing and Furring, 25 Gage: ASTM C 1002-88, Type S.

2.1.3 Resilient Channels: Fabricate resilient furring members in accordance with ASTM C 645-88, from hot dip zinc coated steel minimum 0.0179 inch thick. Provide manufacturer's special type designed to reduce sound transmission. Acceptable products, or equal:

Gold Bond Building Products; Resilient Furring Channels
U.S. Gypsum Co.; RC-1 Resilient Channels

2.1.4 Metal Trim: ASTM C 1047-85(1990), fabricated from hot-dip zinc coated sheet steel.

2.1.5 Taping and Finishing Materials: ASTM C 475-89, all purpose type.

.1 Joint Tape: Paper reinforcing tape.

.2 Joint Compound: Factory-packages vinyl-based, ready-mixed formulation, all-purpose type formulated for both taping and topping compounds.

2.1.6 Acoustical Sealant: Specified in Section 07920.

2.1.7 Laminating Adhesive: Special adhesive or joint compound recommended for laminating gypsum panels.

2.1.8 Control Joints:

.1 Flat Surfaces: Hot-dip zinc coated sheet steel, .093 inches thickness, "v" shaped.

.2 Curved Surfaces: Vinyl extrusion "v" joint bonded to zinc coated steel flanges. Acceptable product, or equal: Gold Bond Gypsum Products; E-Z Strip.

PART 3 – EXECUTION

3.1 EXAMINATION:

Before applying gypsum board ensure that corners and framing are plumb, true and solid and that framing members are properly spaced. Edges and ends of board shall have solid bearing. Do not start work until deficiencies have been corrected. Start of work of this section constitutes acceptance of the surfaces.

3.2 INSTALLATION OF GYPSUM BOARD:

3.2.1 Application:

.1 Use water resistant gypsum board within toilets, kitchen, within 8' of sinks and water heaters, and elsewhere as indicated.

.2 Use backing board or regular gypsum board for base layer for 2 layer applications. Use Type X gypsum sheathing or Type X gypsum board where required for fire rating.

.3 Use fire retardant gypsum board where indicated or required to achieve fire rated partitions

and ceilings.

.4 Use foil backed gypsum board for metal framed or furred exterior walls insulated with unfaced batt insulation.

.5 Use Type X or regular gypsum board in all locations not otherwise indicated or specified.

3.2.2 General: Install and finish gypsum boards to comply with ASTM C 840-88 and GA-216.

.1 Use gypsum board of maximum practicable lengths to minimize end joints. Stagger end joints when they occur. Locate end joints as far as possible from the center of walls and ceilings.

.2 Install gypsum boards in moderate contact, without forcing them in place. Do not place square or cut ends or cut edges against tapered edges.

.3 Except for face layer of double layer construction, support ends and edges of gypsum boards on framing or furring members. Joints on opposite sides of the same partition shall not occur on the same stud.

.4 Floating Construction: Where feasible, including where recommended by manufacturer, install gypsum board over metal framing with floating internal corner construction.

3.2.3 Fastening: Locate fasteners not less than 3/8 inch nor more than 1/2 inch from edges and ends of gypsum board. Drive fasteners perpendicular to the gypsum board surface with heads set slightly below the gypsum board surface for finish layers and even with the surface for base layers. Attach gypsum board starting from the center of each panel and proceeding toward the outer edges. Fasten gypsum board in place with screws over metal framing and with nails or screws over wood framing.

3.2.4 Sound Rated Partitions: Where sound rated partitions are indicated, seal construction at perimeters, behind control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant including a bead at both faces of partitions. Acoustical sealant specified in Section 07900. Comply with ASTM C 919-84 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.

3.2.5 Nonrated Single Layer Construction:

.1 Apply gypsum board with the long dimension at right angles to ceiling framing and at right angles or parallel to wall framing members. Use maximum-length panels to minimize end joints.

.2 Apply ceiling panels before wall/partition board application to the greatest extent possible.

.3 Attach gypsum board with screws spaced 12 inches on center for ceilings and 16 inches on center for walls. Use 1 inch long screws for metal framing and furring.

3.2.6 Nonrated Double Layer Construction: Provide one of the following methods at the Contractor's option.

.1 Mechanically Fastened Face Layer: Apply base layer with the long dimension at right angles for the framing members. Attach the base layer with screws spaced 24 inches on center. Use 1 inch long screws for metal framing. Apply face layer with long dimension at right angles to the base layer. Attach the face layer with screws 24 inches on center. Use 1-5/8 inch long screws.

.2 Adhesive Applied Face Layer: Apply base layer with the long dimension at right angles to the framing members. Attach the base layer with nails or screws of sizes and spacings as specified for single layer construction. Apply the face layer with long dimension perpendicular to the base layer. Laminate the face layer to the base layer with all purpose joint compound applied to the back of the panel with a notched spreader. Hold the face layer in position until adequate bond is achieved using temporary fasteners or bracing. Remove temporary fasteners and fill all holes with joint compound as specified herein.

3.2.7 Rated Fire Resistive Partitions: Install and fasten gypsum board in accordance with CCR Title 24, Part 2, Table 7-B or UL Design.

3.2.8 Double Layer Rated Fire Resistive Gypsum Sheathing: Apply first layer of sheathing vertically over the center of framing members. Fit sheathing snugly around all openings. Attach sheathing with 1" long Type S self-tapping wallboard screws spaced 4" on center maximum around perimeter and 8" on center to intermediate studs. Apply second layer of sheathing similar to the first with joints staggered 24". Attach second layer of sheathing to the studs (through the first layer) using 1-5/8" long Type S, self-tapping wallboard screws spaced a 8" on center maximum around perimeter and 12" on center maximum in the field. Cover sheathing with building paper and lath prior to application of exterior plaster.

3.2.9 Double Layer Curved Surfaces: Thoroughly moisten the 1/4" thick gypsum wallboard using a short nap paint roller, water pump, or spray gun, applying clean water to the entire face and back surfaces. Do not allow water to stand or puddle. Stack moistened boards on a flat surface and allow to stand for at least one hour. Apply base layer at right angles to framing, fasten one end to the framing with screws at 24" on center and gradually push the board against the framing, fastening with screws at 24" on center as the work proceeds from the fixed end toward the free end. Apply the face layer at right angles to the base layer working in the same manner.

3.2.10 Resilient Channels: Install resilient channels at right angles to the framing members. Attach channels through alternate flanges at each framing member with screws. Screws shall be 1 inch long for metal framing. Splice channels by nesting directly over framing members and attaching through each resilient channel flanges with one fastener.

3.2.11 Metal Trim: Attach corner and edge trim and control joints with screws spaced not more than 9 inches on center.

.1 Install the gypsum board metal corner trim where indicated and at vertical and horizontal external corners and angles.

.2 Install metal edge trim where indicated and at junctions of gypsum board and walls of other materials and where there are exposed edges.

.3 Provide control joints where indicated on the drawings. If no control joints are indicated, provide joints to ensure that unbroken wall surfaces are limited to 30 feet in length and unbroken ceiling surfaces are limited to 2500 square feet or 50 feet in either direction.

3.2.12 Edge Sealing: Cut edges, utility holes, and joints of water resistant gypsum board shall be treated with the gypsum board manufactures recommended waterproof sealant before installation.

3.2.13 Tolerances: Gypsum board surfaces shall have a maximum variation of 1/8 inch in 10 feet when a straight edge is laid on the surface in any direction and no measurable variation in any 2 foot direction.

3.3. TAPING AND FINISHING:

3.3.1 Tape and finish joints, corners, fastener heads, and other imperfections in accordance with the manufacturer's specifications and recommendations to provide a smooth finish.

3.3.2 Reinforce joints, wall and ceiling angles, and inside vertical corners with tape embedded in joint compound. Finish with not less than 2 applications of joint compound, allowing each application to dry thoroughly and sanding between coats as required.

3.3.3 Levels of Gypsum Board Finish: Provide the following levels of gypsum board finish in accordance with GA-214.

.1 Level 1: Provide for ceiling plenum areas and concealed areas, unless a higher level of finish is required for fire-resistive-rated assemblies and sound-rated assemblies. Where Level 1 gypsum board finish is indicated or specified, apply joint compound for embedding coat. Remove excess joint compound.

.2 Level 2: Provide for gypsum board substrates for ceramic tile or other panel application. Where Level 2 gypsum board finish is indicated or specified, apply joint compound for first coat in addition to embedding coat. Remove excess joint compound.

.3 Level 3: Provide for all exposed gypsum board surfaces a medium "orange peel" textured finish as approved by the Architect. Where Level 3 gypsum board finish is indicated or specified, embed tape in finishing compound plus 2 separate coats applied over joints, inside angles, fastener heads, and accessories using ready-mixed, drying type, all-purpose taping compound, sanding between each coat. After drying, lightly sand or otherwise treat the surface of the compound to provide a smooth even surface free of porosity or other surface variations.

.4 Level 4: Not Used.

.5 Level 5: Not Used.

3.3.4 Treat external corners, edges, and ends with metal beads and edge trim. Finish with 3 coats of joint compound and feather out between 8 inches and 10 inches from the nose.

3.3.5 The final application of compound and sanding shall leave all gypsum board surfaces uniformly smooth and in condition to receive specified finish.

3.4 REPAIR, CLEAN-UP AND PROTECTION:

3.4.1 Repair fastener pops by driving a new fastener approximately 1-1/2 inches from the fastener pop and reset the popped fastener. When face paper is punctured, drive a new fastener approximately 1-1/2 inches from the defective fastener. Fill damaged surfaces with compound.

3.4.2 Upon completion of the work, remove from adjacent surfaces, overspray, splatter and daubs of taping and finish compound and textured finishes. Remove tools, equipment, unused material and cuttings and leave the work in a clean orderly manner.

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SECTION 09510

ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY:

1.1.1 Section includes: Acoustical ceilings complete, including acoustical lay-in panels, acoustical tile, and suspension systems.

1.1.2 Related Documents: The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES:

The editions of standards and specifications published by the organizations, listed below and referenced herein, apply to the work only to the extent specified by the reference.

American Society for Testing and Materials (ASTM)
Acoustical Insulation Manufacturer's Association (AIMA)
General Services Administration Federal Specifications (Fed. Spec.)

1.3 SUBMITTALS:

1.3.1 Shop Drawings: Submit shop drawings showing reflected ceiling plans; location of acoustical ceilings and suspension systems; location of light fixtures, diffusers, speakers and other exposed to view items; list of materials; dimensions, jointing, method of hanger attachment, fastenings and other pertinent information. Shop drawings may be in the form of revised copies of the Architect's reflected ceiling plan showing any proposed changes from the layout indicated.

1.3.2 Product Data:

.1 Submit manufacturer's catalog cuts, specifications, and other data for each component of the acoustical ceiling systems as necessary to demonstrate compliance with these specifications.

.2 Submit copies of the suspension system manufacturer's current ICBO Evaluation Report.

1.3.3 Samples: Submit the following samples for review:

.1 12-inch long samples of main tees, cross tees and perimeter molding.

.2 12" by 12" samples of each type of acoustical units to be used in the work.

1.3.4 Submittal procedures and quantities are specified in Article 3, Section 3.10, Shop Drawings, Product Data, and Samples.

1.4 REGULATORY REQUIREMENTS:

1.4.1 Flame Spread Rating: Provide acoustical ceiling units bearing the label of Underwriters' Laboratories, or other testing agency acceptable to the State Fire Marshal, indicating that the units provide the specified flame spread rating.

1.4.2 Seismic Requirements: Furnish and install suspension systems in accordance with the suspension system manufacturer's current ICBO Evaluation Report; California Code of Regulations (CCR), Title 24 Part 2, California Building Code, Table No. 23-P and Sec. 25; and Interpretation of Regulations No IR 25-2 issued by the Division of the State Architect.

1.5 DELIVERY, STORAGE AND HANDLING:

1.5.1 Deliver materials to the project in original unopened packages bearing the manufacturer's name, brand designation, and label verifying compliance with these specifications. Store materials in properly protected and dry storage area.

1.5.2 Immediately before installation, store acoustical units for not less than 24 hours at the same temperature and relative humidity as the space where they will be installed.

1.6 PROJECT CONDITIONS:

Maintain a uniform temperature of not less than 60 degrees F nor more than 85 degrees F and a relative humidity of not more than 70 percent continuously from 24 hours before installation until 24 hours after completion of work.

1.7 SCHEDULING:

Wet operations such as plastering, concrete and masonry work shall be completed and dry before installation of acoustical ceilings. Mechanical, electrical and other work above the ceiling line shall be completed and approved before start of acoustical ceiling installation.

1.8 EXTRA MATERIALS:

Deliver stock of maintenance material to the Owner. For each 100 acoustical ceiling units installed, furnish 2 full size acoustical ceiling units matching products installed, packaged with protective covering for storage, and identified with appropriate labels.

PART 2 - PRODUCTS

2.1 ACOUSTICAL CEILING UNITS:

2.1.1 Acoustical Materials: Meet the requirements of Fed. Spec. SS-S-1188. Furnish each type specified from one manufacturer, with the color and texture identical throughout.

2.1.2 Acoustical Lay-in Panels:

.1 Type CG-3: Noncombustible mineral fiber with a factory applied vinyl latex paint finish.
.2 Form: Wet formed mineral fiber.

.3 Light Reflection Factor: 0.84 minimum.

.4 Flame Spread and Smoke Developed Ratings: 0-25 flame spread and 0-15 smoke developed in accordance with ASTM E 84-04.

.5 Noise Reduction Coefficient: Minimum 0.60.

.6 Size: 24" by 48" by 5/8" thick.

.7 Attentuation Factor: 35-39 DB; 11 frequency average.

.8 Edge Detail: Square.

.9 Pattern: Fine Fissured

Armstrong World Industries

2.2 SUSPENSION SYSTEM:

2.2.1 Hanger Wires: 12 gage galvanized double-annealed steel.

2.2.2 Exposed Lay-in System: Direct hung system meeting the requirements for heavy duty classification of ASTM C 635-00. Acceptable products, or equal:

Chicago Metallic; 1850-01 main runners;
1822-01 and 1854-01 cross runners
Donn Corp.; DX-24 main runners; DXO-216 and
DXO-416 cross runners

.1 Main Runners and Cross Tees: Double web type of cold rolled steel with protective coating and with painted steel caps. Width of exposed faces shall be 15/16 inch.

.2 Wall Moldings: Cold rolled steel with protective coating.

.3 Intersections and Connections: Provide intersections and connections capable of withstanding a mean ultimate test load of 180 pounds or twice the actual load, whichever is greater, in tension when tested in accordance with ASTM C 635-97.

.4 Finish: Finish all exposed metal parts with a baked on vinyl finish, matte white color.

2.3 MISCELLANEOUS MATERIALS:

Tile Adhesive: Meet the requirements of ASTM D1779, type recommended by tile manufacturer, bearing UL label for flame spread rating of 25 or less.

PART 3 - EXECUTION

3.1 EXAMINATION:

Examine surfaces and conditions affecting proper installation of the materials, and report defects in materials or surfaces to which acoustical tile is applied. Do not start work until deficiencies have been corrected. Start of work of this section constitutes acceptance of the surfaces.

3.2 INSTALLATION OF CEILING SYSTEMS:

3.2.1 Place units as indicated on the shop drawings. Install with joints true and straight and junctures with ceilings, walls and openings neat and tight. Completed work shall present a smooth plane and level surface, free from unevenness, edge or corner offsets, cupping, scratches and other imperfections.

3.2.2 Perform all cutting required for fixtures, pipes and other work passing through acoustical tile and panels. Neatly and tightly fit units to such work and adjoining work. Fit border units neatly and tightly against abutting surfaces. Replace loose and damaged tiles and panels when directed. Touch-up all damaged finishes. Leave all surfaces clean and free from marking and other disfigurement.

3.2.3 Hanger Wires: Space hanger wires as specified for each type of suspension system. Provide each hanger wire in one piece without splices.

.1 Anchor each wire to the structure above by one of the means detailed in DSA IR 25-2. Bend hanger wires directly across the bulb of the main runner and tight against the connection device at supporting construction, then wrap the wire around itself in 3 tight wraps within 1-1/2 inches.

.2 Provide 12 gage hanger wires at the ends of all main and cross runners within 8 inches from the support or within 1/4 of the length of the end tee, whichever is least, for the perimeter of the ceiling area. End connections for runners which are designed and detailed to resist the applied vertical and horizontals forces may be used in lieu of the 12 gage hanger wires subject to DSA/SSS review and approval.

.3 Provide trapeze or other supplementary support members at obstructions to maintain hanger spacing. Provide additional hangers, struts or braces as required at all ceiling breaks, soffits or discontinuous areas. Hanger wires that are more than 1 in 6 out of plumb shall have counter-sloping wires.

.4 Ceiling grid members shall not be attached to more than 2 adjacent walls. Ceiling grid members shall be at least 3/4 inch free of other walls. If walls run diagonally to ceiling grid system runners, one end of main and cross runners shall be free with a minimum of 3/4 inch clear at wall. (Per ASCE 7-05, 13.5.2.2, Item 6

.5 At the perimeter of the ceiling area where main or cross runners are not connected to the adjacent wall, provide interconnection between the runners at the free end to prevent lateral spreading. A metal strut or a 16-gage wire with a positive mechanical connection to the runner may be used.

a. Where the perpendicular distance from the wall to the first parallel runner is 12 inches or less, this interlock is not required.

.6 Provide sets of four 12 gage splayed bracing wires oriented 90 degrees from each other at the following spacing:

a. Place sets of bracing wires at a spacing not more than 12 feet by 12 feet on center.

b. Provide bracing wires at locations not more than 1/2 the spacings given in (1) above from each perimeter wall and at the edge of vertical ceiling offsets.

c. The slope of these wires shall not exceed 45 degrees from a horizontal plane and shall be taut without causing the ceiling to lift. Compression struts attached to the ceiling and the structure shall be provided at bracing points. Splices in bracing wires are not permitted without special DSA/SSS approval.

d. Partitions: Non-bearing partitions that extend to and terminate at a suspended ceiling, and are supported laterally by an adequate bracing system of splayed wires spaced not more than 8 feet on center along the top edge of the partition or by other equivalent means, may be considered as not adding to the lateral load required to be resisted by the ceiling system.

.7 Fasten hanger wires with not less than 3 tight turns. Fasten bracing wires with 4 tight turns. Make all tight turns within a distance of 1-1/2 inches. Hanger or bracing wire anchors to the structure shall be installed in such a manner that the direction of the wire aligns as closely as possible with the direction of the forces acting on the wire.

.8 Separate all ceiling hanging and bracing wires at least 6 inches from all unbraced ducts, pipes, conduit, etc.

.9 Attach all light fixtures to the ceiling grid runners to resist a horizontal force equal to the weight of the fixtures.

.10 Flush or recessed light fixtures and air terminals or services weighing less than 56 pounds may be supported directly on the runners of a heavy duty grid system but, in addition, they shall have a minimum of two 12 gage slack safety wires attached to the fixture at diagonal corners and anchored to the structure above. All 4 feet by 4 feet light fixtures shall have slack safety wires at each corner.

a. All flush or recessed light fixtures and air terminals or services weighing 56 pounds or more shall be independently supported by not less than 4 taut 12 gage wires each attached to the fixture and to the structure above regardless of the type of ceiling grid system used.

b. The 4 taut 12 gage wires including their attachment to the structure above shall be capable of supporting 4 times the weight of the unit.

.11 All fixtures and air terminals or services supported on intermediate duty grid systems shall be independently supported by not less than 4 taut 12 gage wires each attached to the fixture or terminal and to the structure above. (Per ASCE 7-05,13.5.6.2.2 Item a)

.12 Support surface mounted light fixtures by at least 2 positive devices which surround the ceiling runner and which are each supported from the structure above by a 12 gage wire. Spring clips or clamps that connect only to the runner are not acceptable. Provide additional supports when light fixtures are 8 feet or longer.

.13 Support pendant mounted light fixtures directly from the structure above with hanger wires or cables passing through each pendant hanger and capable of supporting 4 times the weight of the fixture. Special details are necessary for this condition at the ceiling grid.

3.2.4 Lateral Bracing System: In all rooms and spaces exceeding 144 square feet in area, provide sets of 4 splayed wires located a maximum of 6 feet from walls and with intermediate sets spaced to form a 12'-0" by 12'-0" pattern. Install the 4 splayed wires at 90 degrees to each other and at an angle not to exceed 45 degrees from the plane of the ceiling. Provide each bracing wire in one piece without splices. Anchor each wire to the structure above by a connection device capable of carrying 200 pounds or the actual design load, whichever is greater with a safety factor of 2. Bend bracing wires directly across the bulb of the main runner and tight against the connection device at supporting construction, then wrap the wire around itself in three tight wraps within 1-1/2 inches.

3.2.5 Exposed Suspension System:

.1 Install main tee runners 48 inches on center supported by 12 gage wire attached to the hanger tabs along the length of the main runner. Locate hanger wires within 8 inches of the end of each main runner at walls, partitions and vertical offsets in the ceiling and spaced not to exceed 48 inches on center between end wires.

.2 Install cross tees perpendicular to main tees at 48 inches on center to form a 2'-0" by 4'-0" exposed grid system. Provide hanger wires within 8 inches of the free end of cross runners at walls, partitions and vertical offsets in the ceiling.

3.2.6 Install wall molding at the perimeter of the defined areas. Attach wall moldings to the wall at not more than 16 inches on center. On two adjacent walls attach each runner to the wall molding with a pop rivet. At opposite walls, provide metal struts or 16 gage wire with mechanical connection to the runner to prevent runners from spreading. Miter all corners of wall molding.

3.2.7 Level the ceiling to within 1/8 inch in 10 feet in any direction.

3.3 INSTALLATION OF ACOUSTICAL UNITS:

3.3.1 Acoustical Panels: Install in coordination with suspension system, with edges concealed by support of suspension members. Scribe and cut panels to fit accurately at borders and at penetrations.

.1 Install hold-down clips in areas where required by governing regulations or for fire-resistance ratings; space as recommended by panel manufacturer.

3.3.2 Adhesive Application of Acoustical Tile: Install by cementing to substrate using amount of adhesive and procedure recommended by tile manufacturer. Install splines in joints between tiles and level to 1/8 inch in 12 feet tolerance. Maintain tight butt joints, aligned both directions. Scribe and cut tile to fit accurately at ceiling edges and penetrations.

3.4 CLEAN-UP:

Replace loose and damaged tile and panels when directed. Touch-up all damaged finish. Leave all surfaces clean and free from markings and other disfigurements. Remove all debris resulting from the work of this section.

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SECTION 09650

RESILIENT FLOORING

PART 1 - GENERAL

1.1 SUMMARY

The work includes the furnishing and installing of resilient flooring and base, edge trim, and accessories, as shown and noted on the drawings and as specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS:

1.2.1 Samples: Submit samples of resilient flooring material, resilient base, edge trim, and accessories for review.

1.2.2 Maintenance Instructions: Submit copies of manufacturer's written instructions for recommended maintenance practices for each type of flooring and accessory. Refer to Section 01700.

1.2.3 Replacement Materials: After completion of work deliver replacement materials to the project site. Furnish as additional 1% of each different tile flooring, from the same manufactured lot as the material installed. Identify materials as to location installed.

PART 2 - PRODUCTS

2.1 MATERIALS: All materials in this section shall maintain a Coefficient of Friction 0.6 min per ASTM D2047

2.1.1 Vinyl Composition Tile: 12" X 12" X 1/8" thick, **non-conductive**, meeting or exceeding the minimum requirements of Federal Specification SS-T-312B(1), Type IV, as manufactured by Armstrong,or equal. Manufacturer's type, color, and patterns shall be as selected. All tile in any one room shall be from the same manufacturer's run. Vinyl Compostion Tile shall have a coefficient of friction of at least 0.6 per ASTM D2047. One acceptable product is Armstrong Contour PUR.

a. Burning characteristics: Vinyl compostion tile must meet or exceed the requirements of ASTM E648 Critical Radiant Flux of 0.45 watts/sq. cm. or more and ASTM E662 smoke density test of less than 450.

2.1.2 Base: Topset (cove) and carpet (straight) base as manufactured by Burke, Roppe, or equal, 4" high, rubber, in colors as selected and approved by the Architect from manufacturer's standard color range. Base at all external and internal corners shall be pre-molded. Note: Topset base at corners to be pre-manufactured corners.

2.2.1 2.1.3 Carpet edge guard (Reducer Strip): Manufacturer's standard extruded or molded heavy duty vinyl or rubber carpet edge molding with minimum 2 inch wide anchorage flange; color as selected from manufacturers standard colors. (Provide submittal per General Conditions)

.1 Acceptable manufacturer, or equal:

Johsonite model CTAXXA

2.1.4 Adhesives and Primers: Adhesives and primers shall be only those products specified or recommended by the manufacturer of the particular resilient flooring furnished. Adhesives shall be cut-back type where required.

2.1.5 Floor Patch and Leveling Compound: Products manufactured specifically for the purpose as recommended by the manufacturer of the particular resilient flooring furnished. Where floors require extensive leveling or repair necessitating several thicknesses of leveling compound, apply "Vi-Tex" Leveling Compound as manufactured by Industrial Products, Inc., underlayment S-180 as manufactured by Armstrong or other equal latex underlayment.

2.1.6 Flame Spread and Smoke Developed Ratings: 0-25 flame spread and 0-450 smoke developed in accordance with ASTM E 662.

PART 3 - EXECUTION

3.1 INSPECTION AND PREPARATION OF SURFACES:

3.1.1 Before starting the installation of resilient flooring or base thoroughly examine surfaces on which the finish flooring and base are to be applied. Examination includes bond moisture, and alkali testing of concrete subfloors. Starting of work will be considered acceptance of the surface involved.

3.1.2 Subfloor surfaces shall be thoroughly dry, clean of dust, paint spots, grease, and bond-breaking or curing compounds. Subsurface shall also be free from unusual roughness and sharp edges to prevent protrusions and bulges after resilient material is laid. Fill joints, cracks, or depressions in concrete slabs and subfloors with specified floor patch. Allow twenty-four (24) hours drying time before applying resilient flooring.

3.1.4 Installation shall not begin until the work of other trades in the area, including painting, has been completed.

3.2 INSTALLATION:

3.2.1 Keep materials at a temperature of 70 degrees F. or higher for at least forty-eight (48) hours before using, and maintain 70-degree or higher room temperatures at least 3 days before, during, and after application of materials. Apply materials in accordance with the manufacturer's installation instructions.

3.2.2 Vinyl Composition Tile:

.1 Layout center lines in both directions of room parallel to walls. Adjust to make cut tile borders of equal width on opposite sides. Lay tile with joints aligned and without contrasting borders. Lay tile with grain running in the same direction, except as otherwise directed.

.2 Apply specified adhesive with a notched steel trowel to ensure an even bed of adhesive for the tile. Cross-trowel to achieve an even thickness.

.3 Lay tile when adhesive has set tacky, starting at the center of the room and working toward walls. Embed each tile in adhesive with closely fitted, straight, hairline joints. Do not cut tile except at walls or obstructions. Neatly scribe around pipes, fixtures, and equipment to form tight joints free of gaps. Finished floors shall be smooth and free from buckles, cracks, breaks, waves, and projecting edges and shall fit neatly at pipes and other installations and obstructions. Remove excess adhesive.

.4 Install edging strips wherever tile terminates at an opening or where there is an unprotected edge. Top of strips shall be flush with top of tile.

3.2.3 Topset or carpet bases: Install base on all walls as indicated and on fronts, toe space, and backs of finished cabinets with adhesive recommended by manufacturer of base. Apply adhesive to both wall and base and press firmly into place. Maintain top edge at true horizontal line. Toe of coved base shall contact floor for entire length. Closely butt end joints, top edge, and faces flush. Remove excess adhesive. Corners, both inside and outside, shall be molded one piece. Do not cut standard base to obtain job base built corners.

3.3 CLEANING, SEALING AND PROTECTION:

3.3.1 Until floors are well seated, at least 72 hours, at a maintained temperature of not less than 70 degrees F., traffic shall be kept to an absolute minimum, and under no conditions shall fixtures, equipment, trucks be allowed.

3.3.2 Cleaning and Sealing: Just before turning building over to the Owner, clean resilient flooring and base thoroughly in accordance with the manufacturer's recommendations..

3.3.3 For the entire period between installation of resilient flooring and acceptance of the project by the Owner, Contractor shall be responsible for protection of floors and keeping them in top condition.

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SECTION 09680

CARPETING

PART 1 - GENERAL

1.1 SUMMARY

The work includes the furnishing and installing of carpet and accessories, complete as shown and noted on the drawings and as specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 QUALITY ASSURANCE:

Tolerances: 5% on specified weights, thicknesses, pile heights and similar qualities; but not applicable to qualities for compliance with governing regulations.

.1 REFERENCES: AATCC and CRI.

1.3 SUBMITTALS:

1.3.1 Manufacturer's Data: Submit data to show compliance with requirements, including test laboratory reports and manufacturer's instructions and recommendations for installation.

1.3.2 Samples: Submit 27" X 18" samples of carpet showing color and pattern selected.

1.3.3 Shop Drawings: Submit layout of each area to be covered with carpet showing location of seams, fills, location of reducer strip or edging and installation details.

1.3.4 Maintenance Materials: Deliver usable scrap materials to Owner's designated storage area as directed, properly packaged, protected and identified. Usable scraps are defined as roll ends less than 9'-0" long, and pieces larger than 3 square feet and 8" wide.

1.3.5 Maintenance Manual: Submit manual of carpet manufacturer's complete recommendations for the care, cleaning and maintenance of carpeting.

1.3.6 Certificates: Manufacturer shall certify flame spread rating and static control rating.

1.4 WARRANTY:

1.4.1 Prior to delivery of carpet, carpet manufacturer shall submit a letter on company letterhead and signed by an officer of the company outlining the following warranties:

.1 The manufacturer shall unconditionally guarantee that the carpet samples registered and the carpet he proposes to furnish in every detail meet or exceed the requirements for material herein specified, within specified tolerances. Contractor shall bear full responsibility for costs of labor, materials and other expenses incurred by replacement of carpet or cushion that have been fabricated and/or installed with manufacturing defects as well as defects caused by faulty installation.

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 Floor Carpet: Meet State of California Specification 7220, Group 1, Type A, Class 2.

.1 One available brand is Collins and Aikman Infinity. Equal carpet products must meet or exceed the Collins and Aikman most current written specifications.

2.1.2 Accessibility Requirements: CBC 1124B.3. Carpet shall have a level loop, texture loop, level-cut or level-cut/uncut pile texture and max. pile height of ½" per CBC 1124.3. Carpet Edges shall comply with CBC Seciton 1124B.2

2.1.3 Colors: As selected by the Architect from manufacturer's standards. Furnish each color selected from a single dye lot.

2.1.4 Flammability: Flame spread of less than 75 when tested in accordance with ASTM E 84-99. NBS flooring radiant panel test, average critical radiant flux of 45 watts per square centimeter.

2.2 CARPET ACCESSORIES

2.2.1 Carpet edge guard (Reducer Strip): Manufacturer's standard extruded or molded heavy duty vinyl or rubber carpet edge molding with minimum 2 inch wide anchorage flange; color as selected from manufacturers standard colors. (Provide submittal per General Conditions)

2.2.2 Adhesives:

.1 Carpet adhesive waterproof, nonflammable type as furnished or recommended by the carpet manufacturer as compatible with adhesives used in backing.

.2 Seam adhesive waterproof, nonflammable and nonstaining type as furnished or recommended by the carpet manufacturer.

.3 Miscellaneous Materials: Provide nails, thread, tapes, adhesives, other accessory items, and materials of types recommended by carpet manufacturer and installer.

PART 3 - EXECUTION

3.1 PRE-INSTALLATION REQUIREMENTS:

3.1.1 Do not install carpet over concrete with excessive moisture or dust producing surface which is not adequately sealed.

3.1.2 Remove debris, cementitious deposits and similar obstructions or substrates to receive carpet. Fill cracks and voids but do not obstruct expansion joints.

3.1.3 Clean surfaces to be carpeted immediately prior to installation of carpet by vacuum cleaning.

3.1.4 Dimensions: Prior to start of carpet installation, check critical dimensions of spaces to be carpeted.

3.2 INSTALLATION:

3.2.1 General: Comply with carpet manufacturer's instructions and recommendations. Place seams as indicated on shop drawings. Locate seams at doorways at centerline of doors. Maintain direction of pattern and texture.

.1 Extend carpet under open-bottomed and raised-bottom obstructions and under removable flanges of obstructions. Extend carpet into closets and alcoves of rooms indicated to be carpeted, unless otherwise scheduled.

.2 Provide cutouts for removable access devices in substrate, bind edges neatly.

.3 Install carpet edge guard at locations where edge of carpet is exposed to traffic. Anchor edge guard to substrate.

3.2.2 Glue-down Installation: Apply primer to entire substrate where necessary for adequate bond of carpet.

.1 Fit sections of carpet into each room or space prior to application of adhesive. Trim off mill edges unless carpet has been pretrimmed. Maintain straight seams.

.2 Apply seaming cement on cut edges of carpet at seams, securing base of pile at cut.

.3 Apply adhesive uniformly to substrate in accordance with manufacturer's instructions. Butt carpet edges tightly together to form seams without gaps. Roll lightly to eliminate air pockets and ensure uniform total area bond of carpet to substrate.

3.3 CLEANING, PROTECTION AND FOLLOW-UP SERVICE:

3.3.1 Remove debris, sort pieces to be saved from scraps to be disposed.

3.3.2 Vacuum carpet with a commercial machine. Remove spots and replace carpet where spots cannot be removed.

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SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing of all materials and equipment and the completion of all painting and painter`s finish on all exposed exterior and interior surfaces as required to complete the finishing of the building as shown and noted on the drawings and specified herein. The General Conditions, Supplementary General Conditions, Special Conditions and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS:

1.2.1 Submittals shall be made in accordance with Section 01340.

1.2.2 Contractor shall prepare samples of colors and textures based upon the color selections and shall submit them in duplicate for approval.

1.2.3 Contractor shall submit a list of all materials proposed for use for approval. If required by the Architect, the Contractor shall submit chemical analysis of paint material for review.

1.3 GENERAL REQUIREMENTS:

1.3.1 The Contractor shall examine the drawings and the specifications of other trades and shall consult with the other trades to determine the full extent of work and items which are specified to include shop priming and shop finish painting.

1.3.2 All conditions affecting the work of this section shall be verified at the job site.

1.3.3 No materials other than those specified, or approved, shall be delivered to the job or used on the work. Materials shall be delivered in manufacturer's sealed containers with labels defining the contents thereon.

1.3.4 Paint materials and equipment, when not in actual use, shall be stored in places specifically assigned for that purpose. Such storage space shall be well ventilated and adequately fire protected. All paint mixing and handling shall be performed in these assigned areas and all containers used for mixing and handling shall be metal and suitably designed for safety. All paint materials, including rags, tarpaulins, mixers, empty containers and filled or partially filled containers shall be removed from the building areas at the close of each working day.

1.4 QUALITY ASSURANCE:

1.4.1 Regulatory Requirements: Comply with applicable codes and regulations of governmental agencies having jurisdiction including those having jurisdiction over airborne emissions and industrial waste disposal. Where those requirements conflict with this Specification, comply with the more stringent provisions.

1.4.2 Comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA).

1.5 WORK INCLUDED:

1.5.1 The intent and requirements of this section, is that all work, items and surfaces which are normally painted and finished in a building of this type and quality, shall be so included in this contract, whether or not said work, item or surface is specifically called out and included in the schedules and notes on the drawings, or is, or is not, specifically mentioned in these specifications.

1.5.2 The following general categories of work and items that are included under other sections, shall not be a part of this section:

.1 Shop prime painting of structural and miscellaneous iron or steel.

.2 Shop prime painting of hollow metal work.

.3 Shop finished work and items.

1.5.3 All exposed mechanical, plumbing and electrical work, which is not factory finished, shall be painted under this section.

1.5.4 The Room Finish Schedules indicated on the drawings, indicates the location of interior room surfaces to be painted or finished. The schedule indications are general and do not necessarily define the detail requirements. The Contractor shall include all detailed refinements and further instructions as may be given by the Architect for the required complete finishing of all spaces and rooms.

1.6 PRODUCT HANDLING:

Deliver all paint to site in manufacturer's labeled and sealed containers. Labels shall give manufacturer's name, brand, type, batch number, color of paint and instruction for reducing. Thin only in accordance with printed directions of manufacturer.

1.7 ENVIRONMENTAL CONDITIONS:

Do not apply exterior paint in damp, rainy weather or until the surface has dried thoroughly from the effects of such weather. Do not apply varnish or paint when temperature is below 50 degrees F. Avoid painting surfaces when exposed to hot sunlight.

1.8 PROTECTION AND CLEAN UP:

1.8.1 Before painting, remove hardware, accessories, plates, lighting fixtures and similar items or provide ample protection of such items. On completion of each space, replace above items. Use only skilled mechanics for removing and connecting above items. Protect adjacent surfaces as required or directed.

1.8.2 Wherever painting and finishing work is being performed, all floors, surfaces and items shall be carefully protected from damage by the painting work. Clean drop cloths shall be provided and used wherever necessary. All supplies, materials, paints, containers, etc., shall be orderly and carefully arranged and protected. All accidental spatter, spillage, etc., shall be immediately cleaned and the damaged surfaces restored to perfect condition. All paint spots and spatter on glass porcelain fixtures, etc., shall be completely removed and the surface cleaned.

1.8.3 At the completion of work in each space or room, all materials, supplies, debris and rubbish shall be removed and the areas left in a clean, orderly condition.

1.9 GUARANTEE: This Contractor shall, in writing, guarantee the painting work against peeling, fading, cracking, blistering, or crazing for a period of two (2) years from the time the Notice of Completion is filed.

PART 2 - PRODUCTS

2.1 MATERIALS:

2.1.1 Paint materials shall be as manufactured by Frazee Paint Co. (F), Sinclair Paint Co. (S), Dunn Edwards Paints (D-E), Olympic Stain Co. (O), or as indicated in the Paint Schedule or approved equal.

2.1.2 All products must be applied in accordance with the Approved manufacturer's directions.

2.1.3 The Contractor shall secure the Color Schedule before undercoating. Unless otherwise specified, all undercoats shall be tinted slightly to approximate the color of the finish coat. Approval of color shall be obtained before proceeding with the work.

2.1.4 Where a specific name is not given for a product or ingredient, such item shall be of the best quality of the approved manufacturer, which is normally used for the intended purpose.

2.2 PAINTING SCHEDULE:

2.2.1 Exterior:

.1 Exterior galvanized metals - Gloss: (All surfaces exposed to sight and/or weather).

Pre-treatment
(F) 667 Phos-Pho-Prime
OR (S) 7113 Vinyl Wash
OR (D-E) GE 123 Galva-Etch

1 Coat (F) 661 Metal Primer
OR (S) 25 Zinc Dust Primer
OR (D-E) QD 43-7 Galv-Alum

1 Coat (F) 381 Super Bond II
OR (S) 248 Sash and Trim Primer
OR (D-E) 10 Series Syn-Lustro

1 Coat (F) 648 Aro-Plate
OR (S) GE2 Sinco Gloss
OR (D-E) 10 Series Syn-Lustro

.2 Exterior Iron and Steel - Gloss: (All Surfaces exposed to sight and/or weather).

2* Coats (F) 664 Rust Stop Primer
OR (S) 15 Chrome Oxide Primer
OR (D-E) 43-5 Corrobar

1 Coat (F) 381 Super Bond II
OR (S) 248 Sash and Trim Primer
OR (D-E) 10 Series Syn-Lustro

1 Coat (F) 352 Classic House Paint II
OR (S) GE 2 Sinco Gloss
OR (D-E) 10 Series Syn-Lustro

*Omit first coat on shop primed surfaces.

2.2.2 RE-PAINTING OF EXTERIOR SURFACES:

2.2.2.1 Where noted to re-paint exterior walls, trims, doors, etc. the contractor shall clean all loose material, dirt, graffiti, etc. from all surfaces prior to painting. Fill in any holes, scratches, gaps, to provide a suitable level surface to match original. Provide 2 coats of flat, semi-gloss or gloss paint for all surfaces noted to be re-painted to match original finish. Colors shall be as selected by owner and contractor shall provide for multiple color scheme: 1) Wall Color; 2) Trim Color; 3) Door and Frame Color. Where siding has separated from edge of metal frame, provide caulking/sealer to provide a fully weather tight condition.

2.2.2 INTERIORS:

.1 Interior metals - Semi Gloss: (Including all exposed piping, conduit, electrical panels, miscellaneous brackets, bolts, fasteners, metal grilles and exposed ducts etc., other than plated or factory finished items).

Ferrous

1* Coat (F) 661 Metal Prime
OR (S) 15 Chrome Oxide Primer
OR (D-E) 43-5 Corrobar

1 Coat (F) 381 Superbond II
OR (S) 975 Sinco Prime Undercoater
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II
OR (S) SG 25 Sinco Satin
OR (D-E) E 5 Series Satin Sheen II

*Omit 1st Coat on shop primed surfaces

Galvanized

1 Coat (F) 661 Metal Prime
OR (S) 28 White Prime
OR (D-E) 42-44 Versaprime

1 Coat (F) 328 Velglo II

OR (S) SG 25 Sinco Satin
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II
OR (S) SG 25 Sinco Satin
OR (D-E) E 5 Series Satin Sheen II

Gypsum Wallboard - Semi Gloss:

1 Coat (F) 061 Aqua Seal
OR (S) 1770 Pigmented PVA Sealer
OR (D-E) W 101 Vinylastic

1 Coat (F) 328 Velglo II
OR (S) 975 Sinco Prime
OR (D-E) E 22-1 Super U-365

1 Coat (F) 328 Velglo II
OR (S) SG 25 Sinco Satin
OR (D-E) E 5 Series Satin Sheen II

Miscellaneous:

Construction visible through screen vents and grilles shall have one heavy coat of flat black paint.

PART 3 - EXECUTION

3.1 PREPARATION:

3.1.1 All surfaces shall be clean and dry prior to painting and finishing. Dirt and dust shall be removed by stiff bristle brush and wiping with cloths. Oil and grease shall be removed by solvent cleaning, using a solvent such as mineral spirits and wiping with clean cloths. Surfaces shall be given a final rinse of clean solvent. Surfaces which have been contaminated with chemicals shall be thoroughly rinsed with water. The first coat of paint shall be applied as soon as possible after cleaning and drying the surfaces.

3.1.2 Shop primed ferrous metal surfaces shall be first washed free of grease, dirt, oil, and dust, using solvents as required. Galvanized surfaces shall be cleaned with solvents and given a vinyl wash coat. All shop primed surfaces shall be repaired and touched-up wherever shop priming is damaged, and at all welds.

3.1.3 Concrete surfaces shall be thoroughly cleaned of all traces of form oil and other deposits from form surfaces and shall have all laitance and powder removed. Surfaces shall be clean and sound and thoroughly cured and dried before starting the painting work.

3.1.4 Wood surfaces shall be sanded smooth and cleaned prior to application of the first coat. Holes, splits and scratches shall be puttied or spackled smooth after first coat application.

3.2 APPLICATION:

3.2.1 All materials shall be applied and cut in neatly so as to dry uniformly to the color and sheen required and shall be free from excessive runs, sags, wrinkles, shiners, streaks and brush marks.

3.2.2 All materials shall be applied in accordance with the approved manufacturer's directions and specifications. Any thinning required, shall be done in the manner and the type of reducer recommended.

3.2.3 Each coat of painted work shall vary in shade from the preceeding coat in a manner that will make each coat readily distinguishable without affecting the finish color. The Architect will inspect each coat and operation before succeeding coats are applied to determine that the work meets the requirements of the specifications.

3.2.4 In enclosed spaces, the application and drying of paint shall be performed only when the temperature is 65 degrees F. or above and maintained constantly to prevent condensation.

3.2.5 Enamel coats shall be sanded smooth prior to re-coating. All defects and uneveness in previously applied coatings shall be repaired before applying the next coat.

3.2.6 Exterior painting shall only be performed when the weather conditions, temperatures and humidity are correct.

3.2.7 Workmanship shall be of the very best quality and only skilled mechanics shall be used on this project.

3.2.8 The work of this section shall be subject to the approval of the Architect. Any work in need of correction because of improper preparation or workmanship, or as a result of failure to comply with these Specifications, shall be satisfactorily corrected by this Contractor at his own expense.

3.2.9 Commencement of the painting work by this Contractor shall signify his acceptance of all surfaces as satisfactory to receive the finish specified herein.

3.2.10 This Contractor shall be responsible for the complete painting finishing of all surfaces indicated in the Room Finish Schedule and as specified herein. Where questions occur as to the indicated surfaces, he shall inform the Architect and receive clarification therefrom.

3.2.11 The proper number of coats of paints and other finishes specified, properly applied, will result in the desired effect. Should this effect not be attained, additional applications of the specified materials and methods shall be made by the Contractor, without additional costs to the Owner.

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SECTION 10100

LIQUID CHALKBOARDS AND TACKBOARDS

PART 1 - GENERAL

1.1 SUMMARY:

Work includes all labor and materials which are required for the complete installation of all liquid chalkboards and tackboards as shown on the drawings and as specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 QUALITY CONTROL:

Requirements of Regulatory Agencies: Chalkboards and tackboards shall conform to California Administrative Code Title 19, Article 42.

1.3 REFERENCES:

The editions of Federal Specifications and of other specifications and standards referenced herein apply to the work only to the extent specified by the reference.

1.4 SUBMITTALS:

1.4.1 Submit shop drawings showing dimensions, details, locations, trim, anchoring and any other pertinent information.

1.4.2 Furnish two (2) typewritten or printed copies of care and cleaning instructions to the Owner.

1.4.3 Samples: Submit 12-inch square samples of chalkboard and tackboard materials showing each of the specified colors.

1.5 DELIVERY AND STORAGE:

Wrap or otherwise package chalkboard and tackboard components for protection against damage during shipment and storage. Store components in a clean dry storage area as packaged by the manufacturer, with manufacturer's seals and labels intact. Store porcelain enameled steel chalkboard panels on edge in a manner to prevent bowing, warping or other irregularities.

PART 2 - PRODUCTS

2.1 MANUFACTURERS:

Subject to compliance with requirements specified herein, provide products of one of the following manufacturers:

AllianceWall Corporation Claridge
Products Equipment Co. A-
1 Educational Equipment Co.
Nelson-Adams Co.

2.2 LIQUID CHALKBOARDS:

2.2.1 Porcelain-on-Metal: Balanced, high pressure laminated, 3-ply construction; with facing sheet, core and backing; complying with the following requirements.

2.2.2 Facing Sheet: Enameling grade steel sheet coated on exposed face with 3 coat process of primer, ground coat and color cover coat and on concealed face with 2 coat process of primer and ground coat, with ground and cover coats fused to steel at firing temperatures standard with manufacturer, but not less than 1200 degrees F. (649 degrees C.).

.1 Proprietary Facing Sheet: At Contractor's option provide "Vitracite" facing sheet be Claridge Products and Equipment, Inc. in lieu of facing sheet construction specified above.

.2 Facing Sheet Thickness: 24 gage.

.3 Cover Coat Finish: Manufacturer's special writing surface with gloss finish intended for use with liquid chalk markers, equal to AllianceWall W401, Silver Screen Gray.

2.2.3 Core: Particleboard complying with ANSI A208.1, Grade 1-M-1, 1/2 inch thick.

2.2.4 Backing Sheet: Aluminum foil, 0.015 inch thick.

2.2.5 Laminating Adhesive: Manufacturer's standard moisture resistant thermoplastic type.

2.3 TACKBOARDS:

2.3.1 Tackboards shall consist of vinyl coated fabric laminated to not less than 7/32 inch thick natural or plastic sealed cork. Cork shall in turn be laminated to 1/4 inch thick hardboard.

2.3.2 Vinyl fabric shall conform to Fed. Spec. CCC-W-408A Type II, shall weigh 22 ounces minimum per lineal yard 54 inches wide and shall have a flame spread rating, of less than 25 when tested in accordance with ASTM E84-81.

2.4 ALUMINUM TRIM AND ACCESSORIES:

2.4.1 Trim shall be 6063-T5 alloy aluminum extrusions having a wall thickness of not less than 0.062 inch. Trim shall have a dark bronze anodized finish conforming to AA designation M12C22A31. Provide trim in straight single lengths wherever possible, otherwise keep joints to a minimum.

.1 Trim shall be of slip on type.

.2 Chalktrough shall be manufacturer's standard ribbed section, solid extrusion with exposed ends smoothly curved. Provide chalktrough under all chalkboards and tackboards.

.3 Map rails shall be an integral part of top edge angle and shall be continuous on all chalkboards and tackboards. Map rails shall incorporate 2 inch wide cork insert and shall be fitted with the following Rand McNally #Q-1A display rail fittings:

a. End Stops: One at each end of each map rail.

b. Map Hooks with Flexible Metal Clips: Two for each 4 foot of map rail or fraction thereof.

c. Roller Shade Brackets: Two for each 4 foot of map rail or fraction thereof.

d. Flagholder: One for each room.

.4 Splice rails shall be manufacturer's standard "H" sections designed to receive and lap board on both edges along vertical butt joints. Exposed face of splice rail shall be colored to match adjacent board. No butt joints will be permitted in boards less than 16 feet in length.

2.5 VINYL COVERED TACK SURFACE:

2.5.1 Panels shall be factory-assembled units consisting of vinyl coated fabric bonded to a fiberboard core on exposed face and wrapped over all four edges.

2.5.2 Fiberboard core shall be medium density cellulose fiber insulating board conforming to ASTM C208-72, Class A or Fed. Spec. LLL-I-535B, Class A. Core material shall have a flame spread rating of 25 or less when tested in accordance with ASTM E84-81a.

2.5.3 Vinyl coated fabric shall comply with Fed. Spec. CCC-W-408A, Type II and shall meet the following minimum requirements:

a. Total weight per lineal yard 54" wide: 24 ounces

b. Vinyl weight, per square yard: 21 ounces

c. Fabric weight, per square yard: 3.0 ounces

.1 One available product is Koroseal "Muratone" as manufactured by B.F. Goodrich.

PART 3 - EXECUTION

3.1 INSTALLATION:

3.1.1 Aluminum Trim: Provide neat, tightly closed, bend-around mitered corners, spliced only if over 16 foot lengths, with no single piece less than 4 feet in length. Fasten to walls with concealed fasteners as recommended by the manufacturer.

3.1.2 Field Assembled Chalkboards and Tackboards: Install plumb and level directly to wall surface, with full aluminum surround trim, chalk tray, fastenings and all related accessories. Check for any surface movement under hand pressure and reinstall board if movement occurs. No chalkboard joints shall be allowed unless the board is over 12 feet long.

3.1.3 Vinyl Covered Tack Surface: Uniformly spread adhesive and install panels to the wall surface in one piece. All panels shall be plumb and level and shall fit snugly to the walls so that there is no movement when pressure is applied to any surface point. Provide vinyl corner moldings at outside corners, color as selected by the Architect.

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SECTION 10400

IDENTIFYING DEVICES

PART 1 - GENERAL

1.1 SUMMARY

This section covers the furnishing and installing of interior and exterior signs and directories as indicated and specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 REFERENCES:

The editions of standards and specifications published by the following organizations, and referenced herein, apply to the work only to the extent specified by the reference.

American Society for Testing and Materials (ASTM)
The Aluminum Association (AA)
American National Standards Institute (ANSI)
Architectural Aluminum Manufacturers Association (AAMA)
U.S. General Services Administration (Fed. Spec.)

1.3 SUBMITTALS:

1.3.1 Omitted.

1.3.2 Shop Drawings: Submit complete shop drawings, catalog cuts, and erection and installation details, as appropriate, for all identification devices. Indicate dimensions, construction details, and installation with relation to the building construction.

1.3.3 Samples: Submit samples of all materials, finishes and coatings before fabrication. Samples shall also include all hardware and attachments required for mounting and/or assembly. All finishes and coatings shall show color and shall be submitted on the materials to which they are to be applied.

1.4 REGULATORY REQUIREMENTS:

Except as specified or indicated otherwise, sign work shall conform to the Accessibility Standards of the California Code of Regulations (CCR), Title 24. All signage shall conform to 2001 CBC Section 1115B.5, 1117B.5 and 1103.2.4. Tactile exit signage shall be provided per CBC Section 1003.2.8.6.

1.4.1 The international symbol of accessibility shall be used to identify facilities that are accessible to and usable by physically disabled persons, and shall be located where shown on plans or required by the above regulations.

.1 Symbol color shall consist of a white figure on a blue background. The blue shall be equal to Color No. 15090 in Federal Standard 595b.

1.4.2 Braille: California Contracted Grade 2 Braille shall be used whenever Braille is required in other portions of these standards. Dots shall be spaced 1/10” (2.54mm) on center in each cell, with 2/10” (5.08mm) space between cells, measured from the second column of dots in the first cell to the first column in the second cell. Dots shall be raised a minimum of 1/40” (0.635mm) above background. CBC Section 1117B.5.6. Recommend rounded or domed California Braille dots, each distinct and separate. Dots with straight sides and flat tops are not readable for many Braille users.

1.4.3 Letter and number size on signs shall have a width-to-height ratio of between 3:5 and 1:1 and a stroke width to height ratio between 1:5 and 1:10 per CBC Section 1117B.5.3.

1.4.4 Characters and symbol shall contrast with their background 70% minimum and have a non-glare finish. Light characters on a dark background.

1.4.5 Raised characters shall conform to the following:

.1 Letters and numbers on signs shall be raised a minimum of 1/32" and shall be sans-serif uppercase characters accompanied by Grade 2 Braille.

.2 Raised characters or symbols shall be a minimum of 5/8" high and a maximum of 2" high.

.3 All letters measured must be uppercase. After choosing a typestyle to test, begin by printing the letters **I**, **X** and **O** at 1 inch height. Place the template's 1:1 square over the **X** or **O**, whichever is narrower. If the character is not wider than 1 inch, nor narrower than the 3:5 rectangle, the proportions are correct. Use the 1:5 rectangle to determine if the stroke of the **I** is too broad, and the 1:10 rectangle to see if it is too narrow. If all the tests are passed, the typestyle is compliant with the proportion code.

PART 2 - PRODUCTS:

2.1 ACRYLIC PLASTIC PLAQUE SIGNS:

2.1.1 Acceptable Products: Acceptable product includes the following, or equal:

ASI Sign Systems; Note: All signs shall match the existing interior signs currently installed at the STEM Center Main building. Contractor shall verify size, type, color, etc. and include in their bid all work required to match and install identical or similar signage.

2.1.2 Provide matte finish plaques in sizes indicated. Fabricate of 0.080 inch thick clear acrylic laminated to 1/8 inch thick oversized opaque acrylic base creating a 1/8 inch uniform border. Provide 1 inch radius corners.

2.1.3 Graphics Application: Silk screen message to rear surface of clear plastic sheet before application of background color.

2.1.4 Messages: See drawings for message content, type face and size. Colors shall be as selected from the manufacturer's standard colors.

PART 3 - EXECUTION

3.1 EXAMINATION:

3.1.1 Examine substrates to receive adhesively applied identification devices before start of work to ensure that they are free of grease, oil, paint, wax, dust, dirt, or other foreign matter that might inhibit bonding to the substrate.

3.1.2 Do not start work until deficiencies have been corrected. Start of work of this section constitutes acceptance of the surfaces.

3.2 INSTALLATION:

3.2.1 Install signs at locations indicated. Ensure that signs are installed plumb and true, at mounting heights indicated, and by method specified. Do not install signs on doors or other surfaces until finishes on such surfaces have been applied.

3.2.2 Anchorage: Provide anchorage where necessary for fastening signs securely in place. Anchorage not otherwise specified or indicated shall include expansion shields and powder-driven fasteners, when approved, for concrete and masonry; toggle or molly bolts to stud flanges or steel backing plates in light gage metal framed partitions; full threaded wood screws to wood doors and machine screws to metal doors. All exposed anchor devices to be vandal proof type.

3.3 ADJUST AND CLEAN:

Repair damage to signs incurred during installation. Replace signs which cannot be repaired to new condition. Clean sign surfaces.

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SECTION 10999

MISCELLANEOUS SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY:

The work includes the furnishing and installing of miscellaneous specialties as indicated on drawings and specified. The Conditions of the Contract and Division 1 apply to this section as fully as if repeated herein.

1.2 SUBMITTALS:

1.2.1 Shop drawings and brochures shall show a list of materials and hardware, sizes, sections, elevations and details of construction, assembly an installation. See Section 01300, for number and manner of submittals.

1.2.2 Shop drawings shall indicate all grounds, backing, blocking, sleepers and other items required for the installation of equipment. Provide necessary templates.

PART 2 - PRODUCTS

2.1 Miscellaneous Site and building Amenities:

1. Roll Up Counter Door: Manufacturer: Alpine Overhead Doors or approved equal.. Size for Frame Clear Opening is 3'-0" x 3'-6" in height. Finish to be stainless steel with manual push up operation. Provide all hardware, trim, 12 ga. Stainless steel shelf, shelf, locks, etc. for a complete and operational installation.

2. Exterior Stainless Steel Sink: As manufactured by Just Manufacturing Company, Model A-544-912 complete with all mounting brackets, traps, piping, cold water gooseneck faucet (ADA approved) etc for a complete installation.

PART 3 - EXECUTION

3.1 INSTALLATION:

3.1.1 Installation of miscellaneous specialty items shall be made in accordance with the drawing, the manufacturer's directions and instructions and to suit the conditions. Proper backing shall be provided for all items.

3.1.2 Inserts, anchors and required devices shall be furnished and installed.

3.1.3 Installation shall be made without damage to the surfaces to which the items are attached. After completion of the installation , accessories and surfaces shall be cleaned and left in perfect condition.

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1955

SECTION 16000

ELECTRICAL

1. PART 1 GENERAL REQUIREMENTS

1.1 SCOPE OF WORK

A. The work covered by this section consists of furnishing and installing all l, materials, equipment, fixtures and performing all labor and operations for complete and operable systems.

B. Provide all new materials, unless noted otherwise, of the best quality, and in perfect condition, and materials of the same make and quality throughout the work and as hereinafter specified. Comply with the requirements of ASTM, NEMA, U.L., and NBFM for materials and equipment.

C. The intent of these specifications is to establish a standard of quality of materials installed. Include materials as specified without exception in the Base Bid. Submit for approval any proposed substitution, complete descriptive, technical, and cost comparison data and test reports. Do not furnish or install any substitute items without written approval at the time of contract signing. Reimburse the Owner for any additional engineering charges and for any changes in the work of other trades resulting from substitutions. List proposed substitutions on the Bid Form, stating the reasons for substitution. When requested by the Architect or Electrical Engineer, samples, electrically wired at 120V. with plug, or system demonstrations of both specified and proposed items will be submitted for inspection at the Electrical Engineer's office and at a time convenient to all concerned parties.

D. Where a substitution alters the design or space requirements indicated on the plans, Contractor is responsible for all additional cost for Engineering to revise plans.

E. Verifying Drawings and Job Conditions:

1. Examine all drawings and specifications in a manner to be fully familiar of all work required.

2. Visit the site and verify existing conditions. Where existing conditions differ from drawings, make adjustments and allowances for all necessary equipment to complete all parts of the drawings and specifications.

F. Shop Drawings:

1. Submit drawings in six sets accompanied by letter of transmittal listing the number and dates of the drawings submitted.

2. Mark the drawings submitted with the name of the project, numbered consecutively, and bearing approval as evidence that the drawings have been checked. Any drawings submitted without this approval will be returned for resubmission.

3. Submit Shop drawings on, but not limited to, the following:

a.	Panelboards	e.	Product List
b.	Lighting Fixtures	f.	Fire alarm system
c.	Intrusion Alarm System		
d.	Data System		

G. Drawings of Record:

Provide and keep up-to-date, a complete record set of blue line prints. Show every change from the original drawings. Keep this set of prints on the job site, and use only as a record set. Do not make changes in the layout without definite instruction in each case. Obtain a set of Contract Drawings from Architect and incorporate all changes as noted on the record set of prints. Deliver this set to the Architect upon completion and acceptance of work.

H. Accuracy of Plans and Specifications:

Plans and/or specifications showing deviation from standard practice methods or from compliance with codes, and/or any omissions, does not relieve the responsibility of furnishing, making or installing all items required by code and/or intended for the function of the system.

I. Permits, Fees and Insurance:

Obtain and pay for all insurance, permits, etc. necessary for this Contract.

J. Codes and Regulations:

All work performed under this Section of the Specifications complies with the rules and regulations of the Division of Industrial Safety, State of California, as set forth in the latest edition of the Electrical Safety Orders, the National Electrical Code, NFPA, and all rules and regulations of local codes having jurisdiction, including the presently adopted edition Title 21 and 24 California Administrative Code.

K. Testing and Adjustment:

Test all circuits, outlets, switches, lights, motors, circuit breakers and any other electrical equipment, upon completion of all electrical work.

L. Guarantees of Materials and Workmanship:

Furnish and install all materials under this Contract, new and free from all defects, and guaranteed for a period of two years from the date of acceptance of the work. Should any trouble develop during this period due to defective material or faulty workmanship, furnish all necessary labor and materials to correct the trouble without additional cost to the Contract. Correct any defective material or inferior workmanship noticed at the time of installation immediately, to the satisfaction of the Architect.

M. Removal of Rubbish:

Remove rubbish, excess materials, tools or equipment related to this portion of the work, frequently during construction and upon completion of the work.

N. Drawings and Specifications:

1. The electrical drawings are considered as part of these specifications, and any work or materials shown on the drawings and not mentioned in the specifications, or vice versa, shall be as if specifically mentioned in both.

2. The data herein specified and shown on the drawings is as exact as could be prepared, but their extreme accuracy is not guaranteed. The drawings and specifications are for assistance and guidance. The installation is essentially as shown and specified. The exact location of the equipment, material, apparatus and devices as well as the distances and levels, are more or less governed by the physical conditions and arrangements of the building. Accept this Contract with this understanding.

3. Make minor changes, when ordered by the Architect, accommodating the installation of the work with other sections of the Contract without additional cost to the Contract.

O. Safety Conditions:

It is the Contractor's responsibility to prevent any damages to personnel and/or property resulting from contact with new or existing energized circuits, switches, circuit breakers, or other electrical apparatus. All electrical work to be constructed with electrical systems de-energized in the area of work.

P. Final Inspection and Acceptance:

After all requirements of the specifications and drawings have been fully completed, a representative of the Owner will inspect the work. Provide competent personnel to demonstrate the operation of any item or system involved to the complete satisfaction of each representative.

2. PART 2. PRODUCTS

2.1 PANELBOARDS:

A. Provide the automatic circuit breaker type, quick-make and quick-break panelboards. Provide wiring gutter sides, top and bottom.

B. Provide panelboards from the same manufacturers as the main switchboard; type, mounting, and size as noted on the drawings with silver-plated copper bussing.

C. Where space is called for on the panelboard schedules, provide space and mounting for future circuit breaker installation as indicated.

D. Use trims having doors equipped with flush type combination lock and catch, two milled type keys supplied with each panel, all locks are keyed alike. Provide a clear covered directory frame with a typed identification card, indicating type of circuit and location, in accordance with final circuitry and panel designation on each door. Completely fill in all panel directories, using actual connections, Owners designations or other factual information. Key all doors to Yale LL803, or as directed by Owner.

E. Where called for on the drawings, provide a separate compartment within the panelboards

for contactors and/or time switches.

2.2 CIRCUIT BREAKERS:

Provide circuit breakers with inverse time characteristic thermal and magnetic tripping elements, with an interrupting capacity of not less than 10,000 amperes, UL labeled, NEMA rated, molded case type. Use common trip single handle multi-pole breakers. Handle extensions are not permitted. All circuit breakers will have covers sealed on non-interchangeable trip breakers and trip unit covers sealed in interchangeable trip breakers to prevent tampering. Be sure the circuit breaker current rating markings clearly visible after breaker is installed. One manufacturer for all circuit breakers for a given panel. Provide bolt-on circuit breakers unless specifically noted on electrical drawings.

2.3 POWER DISCONNECT SWITCHES:

A. Provide power disconnect switches having product construction requirements as specified and/or indicated. Where not otherwise indicated, the following requirements apply:

1. Enclosure: NEMA I, surface type in dry locations. Use NEMA 3R for exterior locations.

2. Ratings: Voltage, ampacity, horsepower and inductive ratings complying with power source voltage and characteristics of load controlled.

3. Mechanism: Heavy-duty, quick-make, quick-break, with voidable interlock to prevent opening enclosure in "ON" position. External lockable handle operation with provision for not less than two padlocks.

4. Poles and Fusing: Comply with load requirements. Provide unfused switches except where fusing is indicated or required to comply with Code Requirements. Where fuses are installed, use dual-element time delay fuses.

B. Provide power disconnect switches of the following manufacturers with characteristics complying with load and power source indicated:

1. Westinghouse: Type HF or HU.

2. General Electric: Type TH.

3. Square D: Type HD or HU.

C. Provide the number of poles necessary to include a pole for each ungrounded conductor. Equip switch with neutral terminal point where neutral is present. Do not switch neutral unless indicated.

2.4 PUSHBUTTON STATIONS AND CONTROL DEVICES:

The type and size of all pushbutton stations, switches, pilot lights and other control devices are as indicated on the drawings.

2.5 RELAYS:

Install control relays for automatic controls or for interlocking as indicated in the drawings. Provide

relays with the number and type of poles and with operating coils as indicated. Equip relays with contacts rated not less than 15 amperes for continuous inductive load, unless otherwise shown or specified. Rate operating coils for continuous duty at the operating voltage shown on the drawings.

2.6 FUSES:

A. Provide (in a location designated by the Owner) a spare fuse cabinet with the following:

1. Nameplate "spare fuses".

2. Necessary fuse holders.

3. Spare set of each size and type of fuses.

B. Provide dual element fuses for all 600 volt or lower voltage requirements unless otherwise indicated or specified. Where fuses are not made for this application, furnish Buss "Limitron" or approved equal fuses.

C. Provide Bussman Fuses as indicated on plans.

D. Replace fuses "blown" or damaged during construction with new fuses of proper rating and type for the particular use, replace spare sets.

2.7 LIGHTING FIXTURES:

Furnish, install and connect lighting fixtures of type designed on the plans.

A. Verify all fixture locations with Architectural drawings prior to rough in.

B. Where there is conflict in fixture quantities on any of the plans the greatest amount will prevail. The description of the lighting fixture supersedes the catalog number and is to be furnished and installed with type to fit description.

2.8 CONDUIT AND FITTINGS:

A. Rigid Conduit (RGS): Hot dipped galvanized or sherardized steel. Republic Steel Co. or approved equal. Intermediate metal conduit may be used, where CEC allows, in lieu of RGS.

B. Electrical metallic tubing (EMT): Welded, electro-galvanized thin wall steel tubing. All couplings are gland compression type.

C. Liquidtight Flexible Metal Electrical Conduit: Hot-dipped galvanized steel with exterior, molded polyvinyl jacket. Use for all final connections to all vibrating equipment, transformers and the like. 18" maximum. Provide a code sized ground wire.

D. Flexible metallic steel tubing: Liquid tight without a nonmetallic jacket. Use as allowed by code and where permitted by this Specification, section 3.06.C. Provide a code sized ground conductor.

E. Condulet Type Fittings: As manufactured by Crouse Hinds Company, Appleton Electric Company or Pyle National or approved equal, smooth inside and out, taper threaded with integral bushings.

2.9 CONDUCTORS:

A. Provide copper conductors, 600 volt A.C. unless noted otherwise. Aluminum conductors are not permitted.

B. Use THWN conductors for underground and damp locations, THHN for dry areas.

C. Deliver conductors to the site in unbroken packages, marked with the manufacturer's name, date of manufacture, voltage and classification letters. Use only wire recently manufactured (10 months or less).

D. Provide signal service and low voltage control conductors as specified or noted on the drawings.

E. No conductor supplying 120 volts or more will be smaller than No. 12 AWG unless otherwise noted on the drawings.

F. Fixture wire to comply with latest requirements of the National Board of Fire Underwriters. The carrying capacity of the wire as per the latest requirements of the National Electrical Code. No fixture wire may be smaller than #18 gauge. Protect wiring with tape or tubing at all points where abrasion is likely to occur.

G. Install all conductors of each electrical system in an approved raceway. Factory assemblies, non-metallic/pliable/corrugated raceways, type UF cable or multi-conductor assemblies are not approved.

H. Use solid conductor, size #10 AWG and smaller, stranded for #8 AWG and larger.

2.10 JUNCTION AND PULL BOXES:

Above grade level, provide galvanized junction and pull boxes with removable covers, secured with machine screws. The sizes of all boxes determined by the number and size of conductors entering the box, and by the sizes of conduit terminating in the box. All boxes conform to the applicable Electrical Safety Orders, State of California. Pullboxes flush with grade shall be concrete, with bolt down concrete or steel covers, per plans, with engraved or beadweld identification.

2.11 OUTLET BOXES:

A. Provide galvanized outlet boxes and covers, one piece pressed steel, knockout fixture outlets equipped with 3/8" fixture studs and plaster rings.

B. Where standard boxes are not suitable, provide boxes of special design to fit space.

C. Cast aluminum or cast iron for outlet boxes exposed to weather, in damp locations, or surface mounted with threaded hubs for conduit connections; cover made watertight with gasket and non-ferrous screws.

D. Provide outlet boxes in plaster covered walls with raised covers or plaster rings to finish flush with plaster.

2.12 SWITCHES:

A. Local single pole switches: Flush tumbler type A.C. rated quiet type, heavy duty, back or side wired with binding screws, 20A, 120/277V rated switches, Bryant #4901, Hubbell or Leviton #1221, Sierra #5021 or Arrow Hart #1991. Two pole, three-way and lock type of the same manufacturer, white.

B. Horsepower rated and approved for motor control service on switches controlling or disconnecting single-phase motor loads in excess of 1/3 h.p. Switches complete with overload devices of proper motor nameplate rating.

2.13 RECEPTACLES:

A. Convenience outlets consist of a duplex convenience receptacle mounted in an outlet box in the wall, flush with the finish surface and complete with plate.

B. Receptacles for convenience outlets: Standard duplex, 3-wire grounding type 15 ampere, 125 volt, Hubbell, Bryant, Leviton or Arrow Hart #5262 white, unless otherwise indicated.

C. Weatherproof G.F.C.I. receptacles: 15 ampere, 2P 3-wire grounding type, 125 volt with gray fiberglass lift cover plate, Hubbell #GF5262, unless otherwise shown on plans.

2.14 PLATES:

A. Provide stainless steel plates for all switches, convenience outlets, telephone outlets and all other similar outlets, unless otherwise specified or noted.

B. Television and telephone outlet cover plates to match jack.

2.15 NAMEPLATES:

Shall be micarta or lamacoid plate, 1/8" thick and have approved size, with beveled edges and engraved white letters on black background. Provide nameplates for all items of electrical equipment as well as circuits in the service distribution and power distribution panelboards; lighting distribution panelboards; separately mounted motor starting switches; disconnect switches; motor control pushbutton stations and other similar devices. Each nameplate as approved by the Architect. Use two machine screws for attachment. Cement/adhesive is not approved.

3. PART 3. EXECUTION

3.1 If construction of building reveals that any part of the Electrical Work would not be readily accessible if installed according to drawings, notify the Architect before proceeding with such installation.

3.2 All concrete work such as pull boxes, raised pads, conduit envelopes and other areas where affecting Electrical Work are the responsibility of the Electrical Contractor.

3.3 Coordinate layout and installation of electrical work with the overall construction schedule and work schedules of various trades to prevent delay in completion of the project.

A. Verify dimensions and information regarding accurate location of equipment, structural limitations, and finish with other affected sections.

B. Job Conditions:

The drawings do not always show offsets, bends, special fittings or junctions or pull boxes necessary to meet job conditions. Provide the items as required at no cost to the Owner.

C. Weatherproof Equipment:

Use weather resistant electrical devices or equipment located in damp, semi-exposed areas. Comply with NEMA Type 3R requirements for enclosures.

D. Where devices are shown diagrammatically in the same location, neatly group them together in a reasonable manner. Provide one-piece plate where such is manufactured.

3.4 Equipment requiring electrical under other sections is part of the Contract. Work includes all necessary connections.

3.5 CONDUIT:

A. Install all conduit concealed, except where specifically indicated as exposed. Use rigid galvanized steel or I.M.C. for all exposed conduit. Paint with two coats to match adjacent surroundings, if viewed by the public.

B. Use galvanized rigid steel on all conduit installed in concrete and masonry walls, 3/4 inch trade size minimum, unless otherwise specified and/or noted on the plans. Verify conduit runs in concrete slab, prior to placement. Otherwise, do not run conduits in slabs.

C. All conduit installed in the dry walls or dry ceilings of the building structures, shall be steel tube (EMT), except that in certain locations and for certain runs where it is impractical to install EMT, and where permission to do so has been given by the Architect, galvanized flexible steel conduit may be used, with a code sized ground conductor.

D. Run conduit so as not to interfere with or contact other piping, fixtures or equipment. Maintain 6" separation from water piping.

E. Cut the ends of all conduit square and carefully ream out to full size, and shoulder in fitting.

F. No running threads will be permitted in locations exposed to the weather, in concrete or underground. Use special watertight union fittings in these locations.

G. Where conduit extends through roof to equipment on roof areas, provide weatherproofing as specified in the appropriate section of these Specifications.

H. Support all conduit in intervals not less than 10'-0" and within 36 inches from any outlet and at each side of bends and elbows. Use galvanized, concealed conduit supports, heavy stamped, one hole malleable conduit clamps secured with nails. On exposed conduit supports, use two hole clamps with screws, or galvanized steel framed channels secured by screws may be used for conduit supports. Perforated iron for supporting conduit is not permitted.

I. Use rigid galvanized steel or I.M.C., threaded, for exposed conduit runs. Install parallel or perpendicular to walls, structural members or intersection of vertical plane and ceilings. Avoid field made bends and offsets where possible. Do not install crushed or deformed raceways.

J. Provide metal sleeves and install where conduit passes through masonry or concrete walls. Use No. 20 gauge galvanized steel sleeves, no more than 1/2 inch greater in diameter than the outside diameter of the conduit. Caulk conduit into sleeves with stone wool, Duseal or Oakum and weatherproof below grade. Where conduit passes through fire resistive walls, partitions, and floors, pack void spaces between conduits with U.S.G. Thermafiber or equal, as approved by the State Fire Marshal.

K. Provide a heavy nylon cord pull rope in all empty conduits for future use. Leave in place for future use in all runs and tagged with plastic tag at terminating end indicating the location of the opposite end of the conduit.

L. Use factory-manufactured ells, except where noted otherwise. Field bends are permitted for EMT conduit less than 1" diameter. Conduit radius for signal system is ten times the internal diameter of the conduit.

M. Cap or seal all conduit ends until wires are pulled.

N. Use watertight gland compression type connectors and couplings on fittings for thin wall metallic conduit. Screw type or crimp type are not permitted.

O. Wire all rotating electrical equipment with flexible, liquid-tight conduit with appropriate slack from disconnect switch to equipment.

P. Install expansion coupling at all expansion joint locations, refer to Architectural. Drawings for locations.

Q. For grouping, use conduit trapezes made up of suitable Unistrut or Kindorf hangers.

R. Seal or cap all conduit for a watertight installation.

S. Use approved conductor pulling machines for all underground conduits. Use of truck is prohibited.

3.6 OUTLET BOXES:

A. Attach outlet boxes on metal studs with TEC screws. Use wood screws for attachment on wood studs. Nails are not acceptable.

B. Cover all boxes with outlet box protector, Appleton SB-CK or approved equal. Keep plaster and dirt from entering box or panels. If plaster does get in, removed it prior to pulling in wires.

C. Close all unused openings with plugs.

3.7 INSTALLATION OF CONDUCTORS:

A. Unless otherwise indicated or specified, do not install conductors of less than No. 12 AWG size. For control conductors protected by 15 ampere or lower overcurrent protection, No. 14 AWG conductors will be installed. Where approved by Code, remote control and signal circuits utilize No. 18 or No. 16 AWG sizes. Increase No. 12 to No. 10 AWG for 120 volt home runs exceeding 75 feet.

B. Color code power wire and cable for feeders and branch circuits.

C. Install all electrical conductors, including signal and communications circuits in an approved raceway.

D. Neatly group conductors in panels, switchgear and terminal cabinets, etc., and form in a manner to fan into terminals with regular spacing. Lace formed groups of conductors with No. 12 waxed twine, or Panduit Co. Nylon Straps Numbers "SST-4-H" or "SST-2". Lace larger conductors with marlin and secure with cleats, or Panduit Co. Nylon Sta-Straps Numbers "SSC-4-H" and tie anchors ETA-1, TA-2 or TM-1-2-3.

E. Install U.L. approved covered wire from all lighting fixture lamp sockets into outlet or junction box.

3.8 WIRING COLOR CODE

A. 208Y/120 Volt System

Phase A - Black.
Phase A Switch Leg - Black with “S” tag.
Phase B - Red.
Phase B Switch Leg - Red with “S” tag.
Phase C - Blue.
Phase C - Switch Leg - Blue with “S” tag.
Travelers - Yellow.
Neutral - White.
Equipment Ground - Green.

B. Provide identification tags on each conductor entering panel, switch, junction box and pull box to identify conductor.

3.9 CONDUCTOR JOINTS AND TAPING:

Make joints in conductors smaller than No. 6 AWG with solderless, tapeless, wing nut type pressure cable connector. Join conductors No. 6 AWG and larger together with approved type or pressure connector and tape to provide insulation not less than that of the conductor. Make connections to switch or bus bar with one-piece copper lugs for conductors No. 8 AWG or larger.

3.10 GROUNDING:

Provide grounding for entire electrical installation as required by the serving utility and codes mentioned in these specifications. Including:

F. Conduit.

G. Neutral or identified conductor of interior wiring system.

H. Power and lighting panelboards.

I. Non-current carrying metal parts or fixed equipment.

J. Electrical panels in separate buildings.

END OF SECTION

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SECTION 16721

FIRE ALARM

1. PART 1 GENERAL REQUIREMENTS

1.1 RELATED SECTIONS

A. Section 13800 - Building Automation and Control.

B. Section 13900 (21 00 00) - Fire Suppression.

C. Section (27 15 00) - (Fire Alarm Communications Horizontal Cabling).

1.2 DESCRIPTION

A. This section of the specification includes the furnishing, installation, connection and testing of the microprocessor controlled, intelligent reporting fire alarm equipment required to form a complete, operative, coordinated system. It shall include, but not be limited to, alarm initiating devices, alarm notification appliances, Fire Alarm Control Panel (FACP), auxiliary control devices, annunciators, and wiring as shown on the drawings and specified herein.

B. The fire alarm system shall comply with requirements of NFPA Standard 72 - 2010 Edition for Protected Premises Signaling Systems except as modified and supplemented by this specification. The system shall be electrically supervised and monitor the integrity of all conductors.

C. The fire alarm system shall be manufactured by an ISO 9001 certified company and meet the requirements of BS EN9001: ANSI/ASQC Q9001-2010, CBC Sections 716.3.3.2 & 907.2.2.2.

D. The FACP and peripheral devices shall be manufactured 100% by a single U.S. manufacturer (or division thereof).

E. The system and its components shall be Underwriters Laboratories, Inc. listed under the appropriate UL testing standard as listed herein for fire alarm applications and the installation shall be in compliance with the UL listing.

F. The installing company shall employ NICET (minimum Level II Fire Alarm Technology) technicians on site to guide the final checkout and to ensure the systems integrity.

1.3. SUBMITTALS

A. General:

1. Two copies of all submittals shall be submitted to the Architect/Engineer for review.

2. All references to manufacturer's model numbers and other pertinent information herein is intended to establish minimum standards of performance, function and quality. Equivalent compatible UL-listed equipment from other manufacturers may be substituted for the specified equipment as long as the minimum standards are met.

3. For equipment other than that specified, the contractor shall supply proof that such substitute equipment equals or exceeds the features, functions, performance, and quality of the specified equipment.

B. Shop Drawings:

1. Sufficient information, clearly presented, shall be included to determine compliance with drawings and specifications.

2. Include manufacturer's name(s), model numbers, ratings, power requirements, equipment layout, device arrangement, complete wiring point-to-point diagrams, and conduit layouts.

3. Show annunciator layout, configurations, and terminations.

C. Manuals:

1. Submit simultaneously with the shop drawings, complete operating and maintenance manuals listing the manufacturer's name(s), including technical data sheets.

2. Wiring diagrams shall indicate internal wiring for each device and the interconnections between the items of equipment.

3. Provide a clear and concise description of operation that gives, in detail, the information required to properly operate the equipment and system.

D. Software Modifications

1. Provide the services of a factory trained and authorized technician to perform all system software modifications, upgrades or changes. Response time of the technician to the site shall not exceed 4 hours.

2. Provide all hardware, software, programming tools and documentation necessary to modify the fire alarm system on site. Modification includes addition and deletion of devices, circuits, zones and changes to system operation and custom label changes for devices or zones. The system structure and software shall place no limit on the type or extent of software modifications on-site.

E. Certifications:

Together with the shop drawing submittal, submit a certification from the major equipment manufacturer indicating that the proposed supervisor of the installation and the proposed performer of contract maintenance is an authorized representative of the major equipment manufacturer. Include names and addresses in the certification. Installing Company must be NESCO affiliated.

1.4. GUARANTY:

All work performed and all material and equipment furnished under this contract shall be free from defects and shall remain so for a period of at least one (1) year from the date of acceptance. The full cost of maintenance, labor and materials required to correct any defect during this one year period shall be included in the submittal bid.

1.5. POST CONTRACT MAINTENANCE:

A. Complete maintenance and repair service for the fire alarm system shall be available from a factory trained authorized representative of the manufacturer of the major equipment for a period of five (5) years after expiration of the guaranty.

B. As part of the bid/proposal, include a quote for a maintenance contract to provide all maintenance, tests, and repairs described below. Include also a quote for unscheduled maintenance/repairs, including hourly rates for technicians trained on this equipment, and response travel costs for each year of the maintenance period. Submittals that do not identify all post contract maintenance costs will not be accepted. Rates and costs shall be valid for the period of five (5) years after expiration of the guaranty.

C. Maintenance and testing shall be on a semiannual basis or as required by the AHJ. A preventive maintenance schedule shall be provided by the contractor describing the protocol for preventive maintenance. The schedule shall include:

1. Systematic examination, adjustment and cleaning of all detectors, manual fire alarm stations, control panels, power supplies, relays, waterflow switches and all accessories of the fire alarm system.

2. Each circuit in the fire alarm system shall be tested semiannually.

3. Each smoke detector shall be tested in accordance with the requirements of NFPA 72 Chapter 7.

1.6. POST CONTRACT EXPANSIONS:

A. The contractor shall have the ability to provide parts and labor to expand the system specified, if so requested, for a period of five (5) years from the date of acceptance.

B. As part of the submittal, include a quotation for all parts and material, and all installation and test labor as needed to increase the number of intelligent or addressable devices by ten percent (10%). This quotation shall include intelligent smoke detectors, intelligent heat detectors, addressable manual stations, addressable monitor modules and addressable modules equal in number to one tenth of the number required to meet this specification (list actual quantity of each type).

C. The quotation shall include installation, test labor, and labor to reprogram the system for this 10% expansion. If additional FACP hardware is required, include the material and labor necessary to install this hardware.

D. Do not include cost of conduit or wire or the cost to install conduit or wire except for labor to make final connections at the FACP and at each intelligent addressable device. Do not include the cost of conventional peripherals or the cost of initiating devices or notification appliances connected to the addressable monitor/control modules.

E. Submittals that do not include this estimate of post contract expansion cost will not be accepted.

1.7. APPLICABLE STANDARDS AND SPECIFICATIONS:

The specifications and standards listed below form a part of this specification. The system shall fully comply with the latest issue of these standards, if applicable.

A. National Fire Protection Association (NFPA) - USA:

No. 12 CO_2 Extinguishing Systems (low and high)
No. 12B Halon 1211 Extinguishing Systems
No. 13 Sprinkler Systems
No. 13A Halon 1301 Extinguishing Systems
No. 15 Water Spray Systems
No. 16 Foam/Water Deluge and Spray Systems
No. 17 Dry Chemical Extinguishing Systems
No. 17A Wet Chemical Extinguishing Systems
Clean Agent Extinguishing Systems
No. 72 National Fire Alarm Code
No. 101 Life Safety Code

B. Underwriters Laboratories Inc. (UL) - USA:

No. 268 Smoke Detectors for Fire Protective Signaling Systems
No. 864 Control Units for Fire Protective Signaling Systems
No. 268A Smoke Detectors for Duct Applications
No. 521 Heat Detectors for Fire Protective Signaling Systems
No. 464 Audible Signaling Appliances
No. 38 Manually Actuated Signaling Boxes
No. 346 Waterflow Indicators for Fire Protective Signaling Systems
No. 1076 Control Units for Burglar Alarm Proprietary Protective Signaling Systems
No. 1971 Visual Notification Appliances

C. Local and State Building Codes.

D. All requirements of the Authority Having Jurisdiction (AHJ).

E. The Video Display Terminal (VDT) shall comply with Swedish magnetic emission and X-radiation guidelines MPR 1990:10.

1.8. APPROVALS:

A. The system shall have proper listing and/or approval from the following nationally recognized agencies:

UL Underwriters Laboratories Inc ULC
Underwriters Laboratories
Canada

B. The fire alarm control panel shall meet UL Standard 864 (Control Units) and UL Standard 1076 (Proprietary Burglar Alarm Systems).

C. The system shall be listed by the national agencies as suitable for extinguishing release applications. The system shall support release of high and low pressure CO_2.

PART 2.0 PRODUCTS

2.1. EQUIPMENT AND MATERIAL, GENERAL:

A. All equipment and components shall be new, and the manufacturer's current model. The materials, appliances, equipment and devices shall be tested and listed by a nationally recognized approvals agency for use as part of a protective signaling system, meeting the National Fire Alarm Code.

B. All equipment and components shall be installed in strict compliance with manufacturers' recommendations. Consult the manufacturer's installation manuals for all wiring diagrams, schematics, physical equipment sizes, etc., before beginning system installation.

C. All equipment shall be attached to walls and ceiling/floor assemblies and shall be held firmly in place (e.g., detectors shall not be supported solely by suspended ceilings). Fasteners and supports shall be adequate to support the required load.

2.2. CONDUIT AND WIRE:

A. Conduit:

1. Conduit shall be in accordance with The National Electrical Code (NEC), local and state requirements.

2. Where required, all wiring shall be installed in conduit or raceway. Conduit fill shall not exceed 40 percent of interior cross sectional area where three or more cables are contained within a single conduit.

3. Cable must be separated from any open conductors of power, or Class 1 circuits, and shall not be placed in any conduit, junction box or raceway containing these conductors, per NEC Article 760-55.

4. Wiring for 24 volt DC control, alarm notification, emergency communication and similar power-limited auxiliary functions may be run in the same conduit as initiating and signaling line circuits. All circuits shall be provided with transient suppression devices and the system shall be designed to permit simultaneous operation of all circuits without interference or loss of signals.

5. Conduit shall not enter the fire alarm control panel, or any other remotely mounted control panel equipment or backboxes, except where conduit entry is specified by the FACP manufacturer.

6. Conduit shall be 3/4-inch (19.1 mm) minimum.

B. Wire:

1. All fire alarm system wiring shall be new.

2. Wiring shall be in accordance with local, state and national codes (e.g., NEC Article 760) and as recommended by the manufacturer of the fire alarm system. Number and size of conductors shall be as recommended by the fire alarm system manufacturer, but not less than 18 AWG (1.02 mm) for Initiating Device Circuits and Signaling Line Circuits, and 14 AWG (1.63 mm) for Notification Appliance Circuits.

3. All wire and cable shall be listed and/or approved by a recognized testing agency for use with a protective signaling system.

4. Wire and cable not installed in conduit shall have a fire resistance rating suitable for the installation as indicated in NFPA 70 (e.g., FPLR).

5. Wiring used for the multiplex communication circuit (SLC) shall be twisted and unshielded and support a minimum wiring distance of 12,500 feet. The design of the system shall permit use of IDC and NAC wiring in the same conduit with the SLC communication circuit.

6. All field wiring shall be electrically supervised for open circuit and ground fault.

7. The fire alarm control panel shall be capable of t-tapping Class B (NFPA Style 4) Signaling Line Circuits (SLCs). Systems that do not allow or have restrictions in, for example, the amount of t-taps, length of t-taps etc., are not acceptable.

C. Terminal Boxes, Junction Boxes and Cabinets:

All boxes and cabinets shall be UL listed for their use and purpose.

D. Initiating circuits shall be arranged to serve like categories (manual, smoke, waterflow). Mixed category circuitry shall not be permitted except on signaling line circuits connected to intelligent reporting devices.

E. The fire alarm control panel shall be connected to a separate dedicated branch circuit, maximum 20 amperes. This circuit shall be labeled at the main power distribution panel as FIRE ALARM. Fire alarm control panel primary power wiring shall be 12 AWG. The control panel cabinet shall be grounded securely to either a cold water pipe or grounding rod.

2.3. SYSTEM COMPONENTS:

A. Strobe lights shall meet the requirements of the ADA, UL Standard 1971, be fully synchronized, and shall meet the following criteria:

1. The maximum pulse duration shall be 2/10 of one second

2. Strobe intensity shall meet the requirements of UL 1971.

3. The flash rate shall meet the requirements of UL 1971.

2.4. SYSTEM COMPONENTS - ADDRESSABLE DEVICES

A. Addressable Devices - General

1. Addressable devices shall use simple to install and maintain decade, decimal address switches. Devices shall be capable of being set to an address in a range of 001 to 159.

2. Addressable devices, which use a binary-coded address setting method, such as a DIP-switch, are not an allowable substitute.

3. Detectors shall be intelligent (analog) and addressable, and shall connect with two wires to the fire alarm control panel Signaling Line Circuits.

4. Addressable smoke and thermal detectors shall provide dual alarm and power/polling LEDs. Both LEDs shall flash green under normal conditions, indicating that the detector is operational and in regular communication with the control panel, and both LEDs shall be placed into steady red illumination by the control panel, indicating that an alarm condition has been detected. If required, the LED flash shall have the ability to be removed from the system program. An output connection shall also be provided in the base to connect an external remote alarm LED.

5. The fire alarm control panel shall permit detector sensitivity adjustment through field programming of the system. The panel on a time-of-day basis shall automatically adjust sensitivity.

6. Using software in the FACP, detectors shall automatically compensate for dust accumulation and other slow environmental changes that may affect their performance. The detectors shall be listed by UL as meeting the calibrated sensitivity test requirements of NFPA Standard 72, Chapter 7.

7. The detectors shall be ceiling-mount and shall include a separate twist-lock base with tamper proof feature. Bases shall include a sounder base with a built-in (local) sounder rated at 85 DBA minimum, a relay base and an isolator base designed for Style 7 applications. Comply with NFPA 72, Chapter 14 Section 14.4.5.3.1-7 and C.F.C Section 907.9.4.

8. The detectors shall provide a test means whereby they will simulate an alarm condition and report that condition to the control panel. Such a test may be initiated at the detector itself (by activating a magnetic switch) or initiated remotely on command from the control panel.

9. Detectors shall also store an internal identifying type code that the control panel shall use to identify the type of device (ION, PHOTO, THERMAL).

10. Detectors will operate in an analog fashion, where the detector simply measures its designed environment variable and transmits an analog value to the FACP based on real-time measured values. The FACP software, not the detector, shall make the alarm/normal decision, thereby allowing the sensitivity of each detector to be set in the FACP program and allowing the system operator to view the current analog value of each detector.

11. Addressable devices shall store an internal identifying code that the control panel shall use to identify the type of device.

12. A magnetic test switch shall be provided to test detectors and modules. Detectors shall report an indication of an analog value reaching 100% of the alarm threshold.

13. Addressable modules shall mount in a 4-inch square (101.6 mm square), 2-1/8 inch (54 mm) deep electrical box. An optional surface mount Lexan enclosure shall be available.

B. Intelligent Photoelectric Smoke Detector

1. The detectors shall use the photoelectric (light-scattering) principal to measure smoke density and shall, on command from the control panel, send data to the panel representing the analog level of smoke density.

C. Intelligent Thermal Detectors

Thermal detectors shall be intelligent addressable devices rated at 135 degrees Fahrenheit (58 degrees Celsius) and have a rate-of-rise element rated at 15 degrees F (9.4 degrees C) per minute. It shall connect via two wires to the fire alarm control panel signaling line circuit.

2.5. BATTERIES:

A. The battery shall have sufficient capacity to power the fire alarm system for not less than twenty-four hours plus 5 minutes of alarm upon a normal AC power failure.

B. The batteries are to be completely maintenance free. No liquids are required. Fluid level checks for refilling, spills, and leakage shall not be required.

C. To meet standby requirements, external battery and charger systems are required.

PART 3.0 - EXECUTION

3.1. INSTALLATION:

A. Installation shall be in accordance with the NEC, NFPA 72, local and state codes, as shown on the drawings, and as recommended by the major equipment manufacturer.

B. All conduit, junction boxes, conduit supports and hangers shall be concealed in finished areas and may be exposed in unfinished areas. Smoke detectors shall not be installed prior to the system programming and test period. If construction is ongoing during this period, measures shall be taken to protect smoke detectors from contamination and physical damage.

C. All fire detection and alarm system devices, control panels and remote annunciators shall be flush mounted when located in finished areas and may be surface mounted when located in unfinished areas.

D. Manual fire alarm boxes shall be suitable for surface mounting or semi-flush mounting as shown on the plans, and shall be installed not less than 42 inches (1067 mm), nor more than 48 inches (122 mm) above the finished floor.

3.2. TEST:

The service of a competent, factory-trained engineer or technician authorized by the manufacturer of the fire alarm equipment shall be provided to technically supervise and participate during all of the adjustments and tests for the system. All testing shall be in accordance with NFPA 72, Chapter 10 and 14.

A. Before energizing the cables and wires, check for correct connections and test for short circuits, ground faults, continuity, and insulation.

B. Close each sprinkler system flow valve and verify proper supervisory alarm at the FACP.

C. Verify activation of all waterflow switches.

D. Open initiating device circuits and verify that the trouble signal actuates.

E. Open and short signaling line circuits and verify that the trouble signal actuates.

F. Open and short notification appliance circuits and verify that trouble signal actuates.

G. Ground all circuits and verify response of trouble signals.

H. Check presence and audibility of tone at all alarm notification devices.

I. Check installation, supervision, and operation of all intelligent smoke detectors using the walk test.

J. Each of the alarm conditions that the system is required to detect should be introduced on the system. Verify the proper receipt and the proper processing of the signal at the FACP and the correct activation of the control points.

K. When the system is equipped with optional features, the manufacturer's manual shall be consulted to determine the proper testing procedures. This is intended to address such items as verifying controls performed by individually addressed or grouped devices, sensitivity monitoring, verification functionality and similar.

3.3. FINAL INSPECTION:

A. At the final inspection, a factory-trained representative of the manufacturer of the major equipment shall demonstrate that the system functions properly in every respect.

3.4. INSTRUCTION:

A. Instruction shall be provided as required for operating the system. Hands-on demonstrations of the operation of all system components and the entire system including program changes and functions shall be provided.

B. The contractor and/or the systems manufacturer's representatives shall provide a typewritten "Sequence of Operation."

END OF SECTION

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SECTION 16735

INTRUSION ALARM SYSTEM

1. PART 1 GENERAL REQUIREMENTS

1.1 SUMMARY

A. Section Includes
   1. Control Panel
   2. Associated Equipment
B. Products Installed But Not Supplied Under This Section
   1. Section 16000 - Electrical

1.2 REFERENCES

A. Underwriters Laboratories (UL):
   1. UL 365 – Police Station Connected Burglar Alarm Units and Systems
   2. UL 609 – Local Burglar Alarm Units and Systems
   3. UL 611 – Central Station Burglar-Alarm Units
   4. UL 985 – Household Fire Warning System Units
   5. UL 1023 – Household Burglar-Alarm System Units
   6. UL 1076 – Proprietary Burglar Alarm Units and Systems
   7. UL 1610 – Central Station Burglar-Alarm Units

B. Federal Communications Commission (FCC):
   1. Code of Federal Regulations Title 47 - Part 15 – Radio Frequency Devices.
   2. Code of Federal Regulations Title 47 - Part 68 – Connection of Terminal Equipment to the Telephone Network.

C. National Fire Protection Association (NFPA):
   1. NFPA70 – National Electrical Code.

1.3 SYSTEM DESCRIPTION

A. The system shall be a Burglary/Access Control/CCTV Switching System that includes the following capabilities:
   1. Listed for UL Commercial Burglary VISTA-250BP (3/17/2003) 13850 - 2 Detection and Alarm
   2. Supports up to 250 zones.
   3. Supports up to eight (8) separate partitions.
   4. Supports up to 250 users.
   5. Provides integrated security, access control, and CCTV switching capability.
   6. Provides supervision of peripheral devices.
   7. Supports up to 96 optional relay outputs.
   8. Supports long-range radio (LRR) communication.
   9. Provides scheduling capability to allow for automated operations.
   10. Supports up to eight (8) alphanumeric paging devices.
   11. Supports panel linking.
   12. Supports alarm reporting via Internet.
   13. Interfaces with automation software.
   14. Capable of being installed using existing wiring.

1.4 SUBMITTALS

A. Submittals shall include manufacturer data sheets for all major system components.

1.5 QUALITY ASSURANCE

A. The alarm manufacturer shall be certified as being compliant with ISO9001.

2. PART 2 PRODUCTS

2.1 SYSTEM PERFORMANCE

A. Control Panel - The control panel shall be ADEMCO VISTA-250BP Commercial Burglary Partitioned Security System or equivalent with an eight (8)-partition, UL commercial burglary control panel that supports up to 250 zones using basic hardwired, polling loop, and wireless zones. It shall also provide supervision of the bell output, RF receivers, and relay modules. In addition, the control shall provide the ability to schedule time-driven events, and allow certain operations to be automated by pressing a single button. The system shall be capable of interfacing with an ECP long range radio (LRR) unit that can send Contact ID messages, and alphanumeric paging devices. The control shall provide integrated access control and CCTV-switching capability.

1. Basic Hardwired Zones - The control shall provide nine (9) style-B hardwire zones with the following characteristics:

    a. EOLR supervision (optional for zones 2-8): Shall support N.O. or N.C. sensors (EOLR supervision required for UL installations).

    b. Individually assignable to one of eight (8) partitions.

    c. Support up to 16 two-wire smoke detectors on one selected zone.

    d. Support four-wire smoke or heat detectors on any zone (power to four-wire smoke detectors must be supervised with an EOL device).

    e. Support up to 50 two-wire latching glass break detectors on one selected zone.

2. Optional Expansion Zones

    a. Polling Loop Expansion – The control shall support up to 241 additional hardwire zones using a built-in two-wire polling (multiplex) loop interface. The polling loop shall provide power and data to remote point modules, and constantly monitor the status of all zones on the loop. Maximum current draw shall not exceed 128 mA. The polling loop zones shall have the following characteristics:

        (1) Interface with RPM (Remote Point Module) devices that provide Class B, Style Y (e.g., 4208U/4208SN) or a

combination of Class B, Style Y, and Class A, Style Z (e.g., 4208SNF) zones.

(2) Individually assignable to one of eight (8) partitions.

(3) Supervised by the control panel.

(4) A 12,000 ft (3658 m) wire run capability without using shielded cable.

(5) Each RPM (Remote Point Module) enclosure shall be tamper protected.

b. Wireless Expansion – The control shall support up to 250 wireless zones using a 5800 series RF receiver (fewer if using hardwire and/or polling loop zones). Wireless zones shall have the following characteristics:

(1) Supervised by control panel for check-in signals (except certain non-supervised transmitters).

(2) Tamper-protection for supervised zones.

(3) Individually assignable to one of eight (8) partitions.

(4) Support wireless devices listed for Commercial Burglary using the 5881ENHC RF Receiver.

3. Partitions – The control shall provide the ability to operate eight (8) separate areas, each functioning as if it had its own control. Partitioning features shall include:

a. A Common Lobby partition (1-8), which can be programmed to perform the following functions:

(1) Arm automatically when the last partition that shares the common lobby is armed.

(2) Disarm when the first partition that shares the common lobby is disarmed.

b. A Master partition (9), used strictly to assign keypads for the purpose of viewing the status of all eight (8) partitions at the same time (master keypads).

c. Assignable by zone.

d. Assignable by keypad.

e. Assignable by relay to one or all eight (8) partitions.

f. Ability to display fire and/or burglary and panic and/or trouble conditions at all other partitions' keypads (selectable option).

g. Certain system options selectable by partition, such as entry/exit delay and subscriber account number.

4. User Codes – The control shall accommodate 250 user codes, all of which can operate any or all partitions. Certain characteristics must be assignable to each user code, as follows:

    a. Authority level (Master, Manager, or several other Operator levels). Each User Code (other than the installer code) shall be capable of being assigned the same or a different level of authority for each partition that it will operate.

    b. Opening/Closing central station reporting option.

    c. Specific partitions that the code can operate.

    d. Global arming capability (ability to arm all partitions the code has access to in one command).

    e. Use of an RF (button) to arm and disarm the system (RF key must first be enrolled into the system).

5. Peripheral Devices – The control shall support up to 30 addressable ECP devices, which can be any combination of keypads, RF receivers, relay modules, annunciator modules, and interactive phone modules. Peripheral devices have the following characteristics:

    a. Each device set to an individual address according to the device's instructions.

    b. Each device enabled in system programming.

    c. Each device's address shall be supervisable (via a programming option).

6. Keypad/Annunciator – The control shall accommodate up to 16 keypads or six (6) touch-screen (i.e.; advanced user interface) keypads. The keypads shall be capable of the following:

    a. Performing all system arming functions.

    b. Being assigned to any partition.

    c. Providing four programmable single-button function keys, which can be used for:

        (1) Panic Functions –activated by wired and wireless keypads; reported separately by partition.

        (2) Keypad Macros –32 keypad macro commands per system (each macro is a series of keypad commands). Assignable to the A, B, C, and D keys by partition.

7. Optional Output Relays - A total of 96 relay outputs shall be accommodated using relay modules. Each relay module shall provide four (4) Form C (normally open and normally closed) relays for general purpose use or two (2) Class-B, Style-Y supervised notification appliance circuit outputs, when using the 4204CF module. The relays shall be capable of being:

    a. Programmed to activate in response to system events.

    b. Programmed to activate using time intervals.

    c. Activated manually.

    d. Assigned an alpha descriptor.

    e. Used for Class B, Style-Y supervised bell outputs (4204CF module).

    f. A combination of 4204 (ECP) and 4101SN (polling loop) relays.

8. Vista Interactive Phone Module – The control shall support the ADEMCO 4285/4286 VIP Modules, which permit access to the security system in order to perform the following functions:

    a. Obtain system status information.

    b. Arm and disarm the security system.

    c. Control relays.

9. LED Annunciator – The control shall support the ADEMCO FSA-8 and FSA-24 annunciators, which are capable of:

    a. Visually identifying a zone or point that is in alarm or trouble.

    b. Programmable for system silence/reset.

    c. Up to 96 LEDs may be used in one system.

    d. A total of four (4) FSA-24 or 12 FSA-8 annunciators may be used in one system.

    e. An optional key switch, FSAKSM module, shall be available for UL listed Silence and Reset capability.

10. Integrated Access Control – The control shall be capable of the following:

    a. Providing a command that activates relays to allow access doors to open (e.g., lobby door), lights to be turned on or off, etc.

    b. Becoming a fully integrated access control system by using numerous Vista Key Single-Door Access Control Modules.

c. Supporting up to 15 Vista Key Access Control Modules. The Vista Key Access Control Modules shall use the same Compass Downloader as the Vista-250BP and shall be programmable from the Compass Downloader or the Keypad/Annunciators.

d. Assigning any number of access control relays to each partition (up to 96 for the system).

e. Supporting up to 500 access card holders using Vista Key.

f. Connecting to the ADEMCO Pass Point Access Control System via the Vista Gateway Module (VGM).

11. CCTV Switching – The System shall be capable of supporting the Vista View 100 CCTV Switching System. The CCTV system shall be fully integrated and be event driven by Fire, Burglary or Access events. When cameras are not event driven, they shall be driven by an automatic preset dwell time. The system shall also be capable of:

    a. Activating the CCTV system via a Form-C relay output.

    b. Operating up to 60 camera inputs and 30 video outputs.

12. Key switch – The control shall support the ADEMCO 4146 Key switch on any one of the system's 8 partitions. If used, zone 7 is no longer available as a protection zone.

13. Voltage Triggers – The system shall provide voltage triggers, which change state for different conditions. Used with LRR (Long Range Radio) equipment or other devices such as a remote keypad sounder, key switch ARMED and READY LEDs, or a printer to print the system's event log.

14. Event Log – The System shall maintain a log of different event types (enabled in programming). The event log shall provide the following characteristics:

    a. Stores up to 1,000 events.

    b. Viewable at the keypad or through the use of Compass software.

    c. Printable on a serial printer using a 4100SM Module including zone alpha descriptors.

    d. Stores Pass Point access control events.

    e. Sends printed events to up to eight (8) alphanumeric pagers.

16. Scheduling - Provides the following scheduling capabilities:

    a. Open/close schedules (for control of arming/disarming and reporting).

b. Holiday schedules (allows different time windows for open/close schedules).

c. Timed events (for activation of relays, auto-bypassing and unbypassing, auto-arming and disarming, etc.).

d. Access schedules (for limiting system access to users by time)

e. End User Output Programming Mode (provides 20 timers for relay control).

f. The system shall automatically adjust for daylight savings time.

17. Communication Features - Supports the following formats and features for the primary and secondary central station receivers:

    a. Formats
        (1) ADEMCO Low Speed (Standard or Expanded).
        (2) Sescoa/Radionics.
        (3) ADEMCO Express.
        (4) ADEMCO High Speed.
        (5) ADEMCO Contact ID.

    b. Backup reporting – The system shall support backup reporting via the following:
        (1) Secondary phone number.

        (2) ECP long-range radio (LRR) interface.

        (3) Option to select long range radio (LRR) or dialup as the primary reporting method (dynamic signaling feature).

    c. Internet reporting – The system shall be capable of communicating with the central station via the internet using Alarmnet-i. It shall shall provide the user with the ability to control the system via a browser interface (i.e., AOL, Netscape, Internet Explorer). All packet data transmitted to the monitoring station shall be encrypted with a minimum of 1024 bits of encryption.

18. Audio Alarm Verification Option - Provides a programmable Audio Alarm Verification (AAV) option that can be used in conjunction with an output relay to permit voice dialog between an operator at the central station and a person at the premises.

19. Cross-Zoning Capability - Helps prevent false alarms by preventing a zone from going into alarm unless its cross-zone is also faulted within 5 minutes.

20. Pager Interface – The Control Panel shall be capable of sending event information to an alphanumeric pager via a VA-8201 pager interface device.

21. Exit Error False Alarm Prevention Feature – The System shall be capable of differentiating between an actual alarm and an alarm caused by leaving an entry/exit door open. If not subsequently disarmed, the control panel shall:
    a. Bypass the faulted E/E zone(s) and/or interior zones and arm the system.

    b. Generate an Exit Error report by user and by zone so the central station knows it was an exit alarm and who caused it.

22. Built-in User's Manual and Descriptor Review - For end-user convenience, the control panel shall contain a built-in User's Manual. It shall include the following capabilities:

    a. By depressing any of the function keys on the keypad for five (5) seconds, a brief explanation of that function shall scroll across the alphanumeric display.

    b. By depressing the READY key for five (5) seconds, all programmed zone descriptors shall be displayed (one at a time). This feature shall provide a check for installers and ensure all descriptors have been entered properly.

23. Programming - The Control shall be capable of being programmed locally or remotely using the ADEMCO Compass Downloader and shall be capable of:

    a. Uploading and downloading all programming information at 300 baud.

    b. Uploading and displaying firmware revision levels from the control.

24. Panel Linking - The Control shall be capable of being networked together with up to eight other controls and being operated by any keypad within the system. It shall provide the ability for users to:

    a. Control multiple zones, partitions, and/or buildings from a central location.

    b. Check status, arm and disarm any partition from any keypad in the system.

    c. Globally arm or disarm partitions based upon user authority.

25. Automation Software - The Control shall be capable of interfacing with automation software via an RS232 input on a single partition.
    The control panel shall be the ADEMCO VISTA-250BP Commercial Burglary Partitioned Security System or equivalent.

2.2 ENCLOSURE

A. The Control Panel shall be enclosed in a metal cabinet, suitable for wall mounting. The dimensions shall not exceed 14.5 inches (36.8 cm) in height, 12.5 inches (31.8 cm) in width or 3 inches (7.6 cm) in depth.

2.3 EXTERNAL DEVICES

A. Motion sensors shall be Visonic Clip wide angle PIR detector with 12 degree vertical adjustment and
switchable walk-test LED.

B. Door contacts shall be flush mount and shall match existing door contacts used on site.

2.4 ELECTRICAL POWER REQUIREMENTS

A. System Power – The Fire and Burglary Alarm System shall operate using standard 120 volts AC, 50/60 Hz power.

1. Control Primary Power – Transformer power shall be 16.5 VAC, 40VA.

2. Backup Battery – A rechargeable 12 VDC, gel type, lead acid backup battery shall be provided. The battery shall be rated between 7 and 34-ampere hours (AH).

3. Alarm Power – Alarm power shall be 10 - 13.8 VDC, 1.7 amps for each bell output

4. Auxiliary Standby Power – Standby power shall be 9.6 - 13.8 VDC, 750 mA maximum.

5. Fusing – The battery input, auxiliary, and bell outputs shall be protected using PTC circuit breakers. All outputs shall be power limited.

2.5. ENVIRONMENTAL CONDITIONS

A. Environmental Conditions – The Fire and Burglary Alarm System shall be designed to meet the following environmental conditions.

1. Storage Temperature – The system shall be designed for a storage temperature of -10□□C to 70□C (14□□F to 158□F).

2. Operating Temperature - The system shall be designed for an operating temperature of 0□□C to 50□C (32□□F to 120□F).

3. Humidity - The system shall be designed for normal operation in an 85% relative humidity environment.

4. Electromagnetic Interference – The system shall meet or exceed the requirements of FCC Part 15, Class B devices, FCC Part 68, IEC EMC directive.

3. PART 3 EXECUTION

3.1 EXAMINATION

A. Submission of a proposal confirms that the Contract Documents and site conditions are accepted without qualifications unless exceptions are specifically noted.

B. The site shall be visited on a regular basis to appraise ongoing progress of other trades and contracts, make allowances for all ongoing work, and coordinate the requirements of this contract in a timely manner.

3.2 INSTALLATION

A. The System shall be installed and tested in accordance with the Manufacturer's Installation instructions. The following conditions are applicable:

1. In order to ensure a complete, functional System, for bidding purposes, where information is not available from the Owner upon request, the worst case condition shall be assumed.

2. Interfaces shall be coordinated with the Owner's representative, where appropriate.

3. All necessary backboxes, pullboxes, connectors, supports, conduit, cable, and wire shall be furnished and installed to provide a complete and reliable System installation. Exact location of all boxes, conduit, and wiring runs shall be presented to the Owner for approval in advance of any installation.

4. All conduit, cable, and wire shall be installed parallel and square with building lines, including raised floor areas. Conduit fill shall not exceed forty percent (40%). All wires shall be gathered and tied up to create an orderly installation.

3.3 TESTING AND CERTIFICATION

A. The Contractor shall demonstrate the functionality of the System upon completion of installation, documenting the result of all tests and providing these results to the Owner. The System shall be tested in accordance with the following:

1. The Contractor shall conduct a complete inspection and test of all installed equipment. This includes testing and verifying connection to equipment of other Divisions.

2. The Contractor shall provide staff to test all devices and all operational features of the System for witness by the Owner's representative and the Authority having jurisdiction. The Contractor shall provide two-way radio communications to assist in the testing. All testing must be witnessed by the owner's representative, prior to acceptance.

3. The testing and certification shall take place as follows:

a. System shall be tested in conjunction with the manufacturer's representative.

b. All deficiencies noted in the above test shall be corrected.

c. Test results shall be submitted to the consultant or owner's representative.

d. System test witnessed by owner's representative and correction of any deficiencies noted.

e. The owner's representative shall accept the System.

f. System test shall be witnessed by the Authority having Jurisdiction, and any deficiencies that are noted shall be corrected.

4. A letter of certification shall be provided to indicate that the tests have been performed and all devices are operational.

END OF SECTION

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SECTION 16740

DATA SYSTEM

1. PART 1 GENERAL REQUIREMENTS

1.1 SCOPE OF WORK

A. Provide all labor, equipment, supplies, transportation, and materials and the performing of all operations necessary for the installation of complete and operating systems, for extension of data Local Area Network, LAN, to new buildings and relocated classrooms as herein specified.

B. The work described by this part includes the furnishing of all materials, equipment, supplies, labor, all conduits, outlets boxes, backboxes, junction boxes, terminal cabinets, backboards, wiring, cables, copper and fiber patch cords, equipment, devices, etc., shall be furnished and installed complete under this section. The Installing Data Systems Contractor shall determine conduit and junction box sizes for the particular wire and cable fi9lls required for the systems installed. (conduit sizes shall comply with the National Electrical Code). The entire responsibility of the system, including the installation, operation, function, testing and maintenance for one (1) year after final acceptance under this section shall be the responsibility of the Data Systems Contractor.

C. The Data Systems Contractor shall furnish and install all equipment, cables, copper and fiber patch cords, devices, and other materials even if not specifically mentioned herein, which are necessary for the proper integration of the system so that the system shall perform the functions listed herein in compliance with all specified requirements.

D. The Install Data Systems Contractor shall hold a valid State of California License, shall have completed at least 20 projects of equal scope, shall have been in business of furnishing and installing data systems of this type for at least five years, and capable of being bonded to assure the owner of performance and satisfactory service during the guarantee period.

E. The Data System Contractor shall be a factory trained and certified for the brand of equipment offered, qualified to extend full warranty offered by manufacturer of the cabling and outlets and shall maintain a fully equipped service organization capable of furnishing adequate repair service to the equipment. Bids received without this certification are subject to rejection.

1.2 APPLICABLE DOCUMENTS

A. The system design described in this document and depicted in the attached drawing package is derived in part from the recommendations made in currently adopted industry standard documents. The lists of Documents below are incorporated by reference:
   1. This Technical Specification and Associated Drawings.

2. ANSI/EIA/TIA-568 Commercial Building Wiring Standard - July 1991, and Standards Proposal No. 2840-A, Proposed Revision of EIA/TIA-568 Commercial Building Cabling Standard (published as TIA/EIA-568-A).

3. EIA/TIA-TSB-36 Technical Systems Bulletin, Additional Cable Specifications for Unshielded Twisted-Pair Cables.

4. TIA/EIA-TSB-40 Telecommunications Systems Bulletin, Additional Transmission Specifications for Unshielded Twisted-Pair Connecting Hardware.

5. ANSI/EIA/TIA-569 Commercial Building Standard for Telecommunications Pathways and Spaces.

6. ANSI/EIA/TIA-606 Administration Standard for the Telecommunications Infrastructure of Commercial Buildings.

7. ANSI/TIA/EIA-607 Commercial Building Grounding and Bonding Requirements for Telecommunications.

8. Building Industries Consulting Services, International (BICSI)Telecommunications Distribution Methods Manual (TDMM) .

9. California Electrical Code (CEC).

10. American Disabilities Act (ADA)

B. If a conflict exists between applicable documents then the order in the list above shall dictate the order of precedence in resolving conflicts. This order of precedence shall be maintained unless a lesser order document has been adopted as code by a local, state or federal entity, and is therefore enforceable as law by a local, state, or federal inspection agency.

C. If this document and any of the documents listed above are in conflict, then the more stringent requirement shall apply. All documents listed are believed to be the most current releases of the documents, the vendor is responsible to determine and adhere to the most recent release when developing the proposal for installation.

1.3 ASSOCIATED REFERENCES:

A. This document describes a system to be installed in accordance with recognized telecommunications industry cabling standards of practice. Although the intent of the standards is to provide an application independent cable system, one or more of the following documents, describing specific network types and topologies, may be pertinent to the overall operation of the system and should be considered associated reference materials.

1. ISO/IEC 8802-3 (IEEE 802.3)

2. ISO/IEC 8802-5 (IEEE 802.5)

3. ANSI ANSI X3T9.5 Fiber Distributed Data Interface (FDDI) Physical Medium Dependent (PMD)

4. ANSI ANSI X3T9.5 Twisted Pair Physical Medium Dependent (TP-PMD)

1.4 JACKS

A. Eight-wire, eight-position modular jacks shall be used for all data outlets. Each jack shall be fed by a separate four pair cable sheath. All four pairs shall be wired to the jack using TIA/EIA-568-B (T568B) wiring scheme. The jacks shall employ PC board mounted (110 or IDC) contacts for termination of the wire. To meet district standards the jack shall be ST part number shall be a Krone 6467-5-181-60-(color as requested), faceplates shall be two port, four port , six port 557691-X or duplex mounting straps as required in any floor box or surface raceway application.

B. The jacks shall be matched to the Category rating of the attached horizontal distribution cable which will all be category 6 compliant.

C. Category 6 patch panels shall be manufactured by Amp or equal.

1.5 FIBER OPTIC CONNECTORS

A. Fiber optic connectors shall meet the following minimum criteria:

1. Fiber optic connectors shall be Corning ST-style connectors.

2. Connectors shall incorporate zirconia ceramic ferrules. The same type shall be used throughout the installation. Corning

3. All connectors provided by the Contractor shall be of the same manufacturer and part number throughout this contract.

4. Fiber optic connectors shall be rated for a mean loss not greater than 0.3 dB per mated pair.

1.6 OUTLET PLATE

A. The outlet shall be configured so that the interconnect couplings are at an acute angle to, or parallel with, the wall surface.

B. The outlet plate shall be affixed to an in-wall or surface mount box with two screws, which match the color of the outlet plate.

2.1 TELECOMMUNICATIONS OUTLET INSTALLATION

A. All outlets shall be installed in the following manner:

1. Wall mount boxes shall be attached to single gang outlet boxes provided by the contractor providing outlets and boxes.

2. Wall mount boxes shall be installed with the center of the plate at 16 inches above finished floor (AFF). The faceplates shall be installed in a (horizontal or vertical) orientation.

3. Any unused faceplate positions shall be covered/filled with a blank insert made of the same or compatible material as the faceplate and shall be

molded in the same color. Blank spaces shall be incorporated between populated positions on the faceplate. Amp,

4. Cables shall be coiled in the in-wall or surface-mount boxes. In hollow wall installations where box-eliminators are used, excess wire can be stored in the wall. No more than 12" of slack shall be stored in an in-wall box, modular furniture raceway, or insulated walls. Excess slack for these situations shall be neatly coiled in the ceiling above the drop location.

B. In addition, each cable type shall be terminated as indicated below:

2.2 100 Σ UNSHIELDED TWISTED PAIR JACKS

A. Cables shall be dressed and terminated in accordance with the recommendations made in the TIA/EIA-568A document, manufacturer's recommendations and/or best industry practices.

B. Pair untwist at the termination shall not exceed one-half an inch.

C. Bend radius of the cable in the termination area shall not exceed 4 times the outside diameter of the cable.

D. The cable jacket shall be maintained as close as possible to the termination point.

E. All modular jacks shall be oriented with the locking tab slot towards the floor.

F. Voice jacks shall be located in the top or top left position of each faceplate. In instances where there are more than one voice jack per faceplate, then the second shall occupy the top right or second position, continuing top to bottom, or left to right. Voice jacks in horizontally oriented faceplates shall occupy the left-most position. Modem jacks shall be considered the last voice jack in the sequence.

G. Data jacks shall occupy the bottom or bottom right position on the faceplate. Where multiple data jacks on a faceplate, data jacks shall occupy the first position available after the phone jack and continue to the last position on the faceplate.

H. Data jacks that are in surface metal raceway (Wiremold 5400 or similar) shall be mounted in the proper termination plate by the manufacturer of the raceway to ensure that the customer gets a professional end product. These termination plates and trim are to be provided by the electrical contractor installing the raceway and power outlets to ensure that all outlets and trim will match. Mounting straps shall be provided by the data contractor. Amp,

2.3 OPTICAL FIBER COUPLERS

A. Singlemode optical fibers shall be terminated with (duplex ST style) connectors and attached to feed-through couplers. Corning/Siecor 95-00-41. Verify with District prior to termination.

B. All fiber optic terminations shall be installed in boxes with bend limiting provisions for fiber slack storage.

C. Wall mounted optical fiber faceplates/boxes shall provide an angled or parallel connector exit in reference to the wall surface.

2.4 HORIZONTAL DISTRIBUTION CABLE

A. Horizontal distribution cables shall be installed from the MDF and IDF to the designated locations in the Work Area Information Outlet(IO). Horizontal distribution cables shall be manufactured in compliance with the mechanical and electrical specifications detailed in the TIA/EIA-SP 2840A (568-A) document, as applicable. Cables not supported under the current revision of the standard shall be of recent design and manufacture and be capable of supporting the application (e.g., broadband coaxial, baseband coaxial).

B. All cables shall be furnished by the contractor in full, factory packaged reels. The reels shall be marked with the respective cable part number and lot number by the manufacturer. Upon request by the Owner, the contractor shall provide manufacturer□s proof of compliance with the required manufacturing guidelines presented in the aforementioned standards. Each reel shall be visually inspected upon receipt and prior to installation to ensure that no damage was incurred during shipment. Any damaged cable shall be returned to the vendor/manufacturer for replacement of the entire reel. The cost for replacement cable shall be borne by the contractor. Any residual cable, in lengths greater than 500 feet, shall be delivered to the Owner and the Owner shall decide the disposition of the cable.

3.1 PRODUCT SPECIFICATIONS

A. The planned cable system shall utilize the following cable types for horizontal distribution. Each cable shall meet or exceed the mechanical and electrical performance characteristics listed below.

3.2 HORIZONTAL UNSHIELDED TWISTED PAIR CABLE

A. Horizontal Unshielded Twisted Pair Cable

B. UTP Enhanced Category 6 for Data and Telephone. Amp,

3.3 HORIZONTAL DISTRIBUTION CABLE INSTALLATION

A. Cable shall be installed in accordance with manufacturer's recommendations and best industry practices.

B. All cables shall be installed in the following manner:

1. Cable raceways shall not be filled greater than the NEC maximum fill for the particular raceway type.

    a. Cable raceways shall not be filled greater than the NEC maximum fill for the particular raceway type. Conduit sizing shall be minimum of 3/4 inch conduit for each outlet with no more than two outlets fed by one 1" homerun. If two outlets are fed by one homerun the conduit shall be 1" to the IDF or MDF and 3/4 inch to the end box. For conduits feeding a multiple outlet surface raceway the sizing shall be as follows: 1" for raceways 6' long and under, 1 1/4 " for raceways 6' to 18' long and multiple conduits to meet this pattern for lengths greater than 18'. These specifications shall take precedence over conduit routing shown on the plans that deviate from this method. The data contractor shall bring any discrepancies to the attention of the owner before bid time.

2. Cables shall be installed in continuous lengths from origin to destination (no splices) unless specifically addressed in this document.

3. Where cable splices are allowed, they shall be in accessible locations and housed in an enclosure intended and suitable for the purpose.

4. The cable's minimum bend radius and maximum pulling tension shall not be exceeded.

    a. When not installed in conduit, (per the plans and electrical specifications requirements), all horizontal cables shall be supported at a maximum of four-foot intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels, not shall they be attached to ceiling grind wires. Horizontal distribution cables shall be bundled in groups not greater than 40 cables. Bundles shall be supported by cable tray, conduit, trapezes, or multiple support strap made by Enrico, Caddy part # CAT21 and CAT32.

5. All horizontal cables shall be supported at a maximum of four-foot intervals. At no point shall cable(s) rest on acoustic ceiling grids or panels.

6. Horizontal distribution cables shall be bundled in groups not greater than 40 cables. Where larger bundles are required, the cables shall be supported by cable tray, conduit, trapezes, or multiple support strap made by Enrico, Caddy part # CAT21 and CAT32.

7. Cable shall be installed above fire-sprinkler and systems and shall not be attached to the system or any ancillary equipment or hardware. The cable system and support hardware shall be installed so that it does not obscure any valves, fire alarm conduit, boxes, or other control devices.

8. Cables shall not be attached to ceiling grid or lighting support wires. Where light supports for drop cable legs are required, the contractor shall install clips to support the cabling.

9. Any cable damaged or exceeding recommended installation parameters during installation shall be replaced by the contractor prior to final acceptance at no cost to the Owner.

10. Cables shall be identified by a self-adhesive label in accordance with the System Documentation Section of this specification. The cable label shall be applied to the cable behind the faceplate on a section of cable that can be accessed by removing the cover plate.

C. In addition, different cable types shall be installed under the following provisions.

3.4 UNSHIELDED TWISTED PAIR

A. Provide a complete Cat 6 channel cabling solution.

a. UTP cable shall be blue.

b. UTP pin configuration shall be 568UON.

c. Station and patch cords are to be provided based on the client's cable coloring scheme.

(Contractor is required to verify quantity of each cable color prior to ordering)

1. The contractor will provide patch cords based on the total number of station cables

per rack and in the following lengths:

a. 60% to be 3' in length

b. 35% to be 7' in length

c. 5% to be 10' in length

2. Station side patch cord shall all be 10' in length.

3. Cat 6 Station and Patch Cord Color Schematic

1. Yellow (Ethernet)

2. Green (UPS)

3. Light Blue (Wireless)

4. Red (Crossover)

5. Orange (Security)

6. Black (VoIP Phones)

7. Dark Blue (Audio Visual)

B. Unshielded twisted pair cable shall be installed so that there are no bends less than four times the cables outside diameter (4 X cable O.D) at any point in the run and at the termination field.

C. Pulling tension on 4-pair UTP cables shall not exceed 25-pounds for a single cable or cable bundle.

D. A minimum amount of slack shall be left in the outlet box, but sufficient slack for at least one re-termination shall be allowed.

3.5 FIBER BACKBONE CABLE

A. The fiber backbone cable and components shall be Corning manufacture 50/125um SX550 hybrid cable 6SM and shall meet the following minimum mechanical and transmission requirements.

B. Contractor to provide and install new fiber panels and pigtailed fiber panels..

C. All 6 strand singlemode fiber strands will be terminated at all locations.

D. Mechanical:

1. Optical fiber shall be housed in a OSP loose tube, gel-filled, construction if used in outside, underground, or overhead.

2. Inside/outside gel-filled construction shall be used if entering a building more than 50 feet outside of threaded rigid conduit.

3. Use OFNR construction if used as a riser cable

4. Use Plenum construction if used in an air plenum of any kind.

5. Optical fiber shall be rated a minimum of 100 Kpsi.

6. Optical fiber elements shall have a ~900 micron tight buffer

7. The optical fiber cable construction shall meet or exceed the requirements of the EIA/TIA-568-A Standard specification

8. Optical fiber cable shall withstand a minimum short term tensile load of 448 pounds without damage to the optical fiber

9. Optical fiber cable shall be able to withstand a minimum bend radius of 128 mm during installation without damage to the optical fiber elements

10. Optical fiber cable shall have a minimum crush resistance of 200 N/cm

E. OPTICAL TRANSMISSION PERFORMANCE:

1. All optical fiber cable shall exhibit the following minimum transmission characteristics:

A. Maximum attenuation of 3.5 dB/km @ 850 nm and 1.5 dB/Km @ 1300 nm

B. Minimum bandwidth of 160 MHz/km @850 nm and 500 MHz/km @ 1300 nm

F. WARRANTY:

1. All optical fiber cable shall have Corning extended warranty.
2. All category 6 cable and associated peripherals shall have AMP extended warranty.

4.1 BACKBONE CABLING SUBSYSTEM

A. Backbone cables will be installed between the locations described in the scope of work and on the plans. An innerduct shall be pulled in all backbone conduits along with the fiber optic cable. This innerduct shall be left with only a pull rope for future use and shall be of the size and quantity called out in other areas of this specification. All conduits shall be plugged with snug plugs and duct seal after innerduct installation is completed. The backbone cable subsystem is comprised of all cable, connecting hardware, pathways and cable management hardware required to form a continuous path from the Telecommunications Entrance Facility (EF) to the Equipment Room, from the ER to each TC, and between TCs on the same floor.

B. All cables shall be furnished by the contractor in full, factory packaged reels. The reels shall be marked with the respective cable part number and lot number by the manufacturer. Upon request by the Owner, the contractor shall provide manufacturer's proof of compliance with the required manufacturing guidelines presented in the aforementioned standards. Each reel shall be visually inspected upon receipt and prior to installation to ensure that no damage was incurred during shipment. Any damage cable shall be returned to the vendor/manufacturer for replacement. The cost for replacement cable shall be borne by the contractor. Any residual cable, in lengths greater than 500 feet, shall be delivered to the Owner and the Owner shall decide the disposition of the cable.

4.2 BACKBONE CABLE INSTALLATION

A. All backbone cables shall be installed in the following manner:

1. Backbone cables shall be installed separately from horizontal distribution cables.

2. Where cables are housed in conduits, the backbone and horizontal cables shall be installed in separate conduits or in separate inner ducts within conduits.

3. Where cables are installed in an air return plenum, the cable shall be installed in conduit, or plenum cable shall be installed in a plenum innerduct to provide protection to the cable.

4. Where backbone cables and distribution cables are installed in a cable tray or wireway, backbone cables shall be installed first and bundled separately from the horizontal distribution cables.

5. Backbone cable shall consist of -strand count as required- strand multimode, loosetube OSP cable emanating from the MDF to each IDF. These cables shall be of the same manufacturer of all the other fiber and copper cabling system and terminations. These cables shall be FDDI+ grade per EIA/TIA standards.

6. All backbone conduit shall have (1) 3/4" innerduct with pull ropes if in a 2" conduit, (2) 1" innerduct with pull ropes if in a 3" conduit, and (4) 1" innerduct with proper "Jack-moon" plugs if installed in a 4" conduit. This innerduct will be for future use in the 2" and 3" conduits and one or as many as necessary will be utilized in the 4" conduit leaving the remainder for future use. All unused innerduct shall have a rubber snug plug with rope tie off installed and all innerduct occupied with cable shall have the appropriate cable seal.

4.3 HORIZONTAL CROSS-CONNECT TERMINATION HARDWARE

A. The backbone side of the horizontal cross-connect, and the main cross connect shall be terminated in the same termination panels as the horizontal cables. The backbone fibers shall be maintained in separate termination panels from the horizontal distribution fiber cables. The backbone termination panels shall be installed in the double swing enclosed rack. Termination details and rack elevations for fiber panel placement shall be provided in the contractor submittals.

B. The contractor shall be required to install, secure and ground the racks. The Contractor shall only be required to install those fiber termination panels provided by the Contractor into the enclosures. Placements of the enclosures are detailed in the attached drawings.

C. Each fiber optic cable shall be terminated in the telecommunications closet in a Corning enclosure providing protection to the terminated fibers. The enclosures shall provide a strain relief bracket for attaching the optical fiber cable and support slack storage of a minimum of 36" per fiber cable. The enclosure shall provide a minimum of 12 ports for fiber terminations and fully enclose both the hardwired cable and the patch cord terminations when the shelf is closed.

4.4 PRODUCT SPECIFICATIONS

A. Products for this installation shall be furnished in new and factory packaged condition. Each product shall be inspected by the Contractor to ensure completeness and that no damage was incurred during shipping. The contractor shall return to the manufacturer, any product found to be deficient. The cost of

the return and replacement product shall be borne by the Contractor. All products provided for this installation shall meet the following minimum criteria.

4.5 FIBER OPTIC CONNECTORS

A. Fiber optic connectors shall meet the following minimum criteria:

1. All fiber terminations to use Corning “Pretium” product line.

2. Fiber optic connectors shall be rated for a mean loss not greater than 0.3 dB per mated pair.

4.6 FIBER TERMINATION PANELS

A. Fiber termination panels shall meet the following minimum criteria:

1. Fiber termination panels shall be Corning capable of handling a minimum of 48 fiber optic connectors with the appropriate number of connector panels and couplers as manufactured by Amp, ,. All unused locations shall be filled with blank panels.

2. Fiber termination panels shall be 19" rack mountable.

3. Fiber termination panels shall be hinged to provide complete access to connectors and slack storage from the front.

4. Fiber termination panels shall be complete with 12 ST-style interconnect couplers.

5. Fiber termination panels shall be equipped with cable strain relief brackets.

6. Fiber termination panels shall provide Amp, equal by Lucent Technologies, le storage and handling for up to 36" of slack per fiber strand.

7. Fiber termination panels shall protect both the installed cable and patch cord cable interface when the panel is in the closed position.

4.7 CABLE PREPARATION

A. All fiber optic cable shall be installed per industry standards. This includes using a proper break-away swivel and sealing the end of all cables before pulling through any conduit system. 10 feet of slack cable shall be left at each end of the cable run for future maintenance purposes.

B. OSP, loose-tube cables shall be properly prepared and protected per industry standards. All cables shall be properly cleaned, the cable ends shall be terminated in a furcation unit and a 900 micron buffer tube for each fiber strand. Each cable OSP buffer tube shall be labeled for strand counts contained therein.

5.1 RACKS/CABINETS

A. The products supplied shall meet the following specifications:

1. IDF Rack shall be a quad post floor mounted racks with all the following list of options. In the event where two racks are required on will be standard quad post rack and one will be a server quad post rack.

2. Inter-bay and end-cap cable managers shall be a single piece full height unit supporting front and rear cable routing and attachment.

3. The inter-bay manager shall have integral routing and slack storage loops supporting a 1.5" minimum bend radius.

4. Inter-bay and end-cap management panels shall be supplied with adjustable routing guides.

5. Both inter-bay and end-cap units shall have removable covers secured with 1/4 turn fasteners.

6. Inter-bay and end-cap cable managers shall securely attach to the rear rail of the rack with #12-24 screws.

7. A cable trough shall be supplied at the bottom of each rack to support patch cord routing between racks.

5.2 CABLE MANAGEMENT

A Horizontal cable management shall be provided in each rack. A minimum of two front wire management panels shall be provided in each rack. One front horizontal wire management shall be provided for each fiber termination box, for each 48 ports of RJ45 panels, and each 48 ports of switches. All racks shall be furnished with a minimum of 25 Velcro cable ties to ensure a neat and manageable system. All cables and their termination on each end shall be labeled per EIA/TIA administration standards. All labeling schemes and label designations shall be reflected on the CAD drawings at the end of the project and in the submittals.

5.3 RACK and BACKBOARD MOUNTING HARDWARE

A TGB ground bus shall be provided at each IDF. B-LINE #SB-476 & SB-477.

B. Racks shall be installed in the following manner (Verify exact placement with District prior to wiring and attachment to floor):

1. Vertical wire management shall be supplied on both sides of all open racks. Vertical wire management shall be Amp,

2. A TGB ground buss shall be provided at each IDF. B-line part numbers SB-476 & SB-477.

3. Data room shall have Conductile flooring installed prior to installation of floor mounted rack

4. Floor mount racks shall be securely attached to the concrete floor using 3/8" hardware. Conductile to be installed prior to securing rack to floor.

5. Open racks shall be secured to the overhead cable ladder using appropriate attachment hardware.

6. All racks shall be grounded to the telecommunications ground bus bar in accordance with Section 9.0 of this document.

7. Rack mount screws (#12-24) not used for installing fiber panels and other hardware shall be bagged and left with the rack upon completion of the installation.

8. Inter-bay and end-cap managers shall be installed to the rear mounting rail of the rack using all available mounting holes.

9. Innerducts and cables shall be securely fastened to the cable managers.

10. Cable feeds shall alternate left and right to minimize congestion at the top of the rack.

11. Wall mounted racks shall be installed with a minimum of six 5/16" lag bolts or masonry anchors into structural building members.

12. All racks shall have a APC AP7830 or equal surge suppression power strip installed with a cord long enough to reach the rack power supply.

13. All racks shall have (1) NEMA L6-30R, (2) NEMA L5-20R and dual gang box with (2) 5-20R plugs installed on the rear outside of the racks. These plugs shall be installed on a dedicated circuit and labeled.

14. Provide required wall mount cross connect block on backboard and required patch cords for connection to IDF rack patch panel.

6.1 CABLE SYSTEM TESTING

A. All cables and termination hardware shall be 100% tested for defects in installation and to verify cable performance under installed conditions. All conductors of each installed cable shall be verified useable by the contractor prior to system acceptance. Any defect in the cable system installation including but not limited to cable, connectors, feed-through couplers, patch panels, and connector blocks shall be repaired or replaced in order to ensure 100% useable conductors in all cables installed.

6.2 COPPER

A. Each cable shall be tested for continuity on all pairs and/or conductors. Coaxial cables shall be tested for continuity, opens shorts and resistance using a volt/ohm meter (VOM) and installed length using a Time Domain Reflectometer (TDR). Twisted-pair voice cables shall be tested for continuity, pair reversals, shorts, and opens using a "green light" type test set. Twisted-pair data cables shall be tested for the all of the above requirements, plus tests that indicate installed cable performance. All category 6 cables shall be tested to ensure the category 6 standard performance to 100Mhtz is complied with. All tests shall be printed out in hard copy in the quantity called out in the general specifications for O&M turn over documents as well as one disc copy for the owners use. These data cables shall be tested using a (Class II) cable analyzer.

6.3 CONTINUITY

A. Each pair of each installed cable shall be tested using a "green light" test set that shows opens, shorts, polarity and pair-reversals. Shielded/screened cables shall be tested with a device that verifies shield continuity in addition to the above stated tests. The test shall be recorded as pass/fail as indicated by the test set in accordance with the manufacturers recommended procedures, and referenced to the appropriate cable identification number and circuit or pair number. Any faults in the wiring shall be corrected and the cable re-tested prior to final acceptance.

6.4 LENGTH

A. Each installed cable shall be tested for installed length using a TDR type device. The cables shall be tested from patch panel to patch panel, block to block, patch panel to outlet or block to outlet as appropriate. The cable length shall conform to the maximum distances set forth in the TIA/EIA-568-A Standard. Cable lengths shall be recorded, referencing the cable identification number and circuit or pair number. For multi-pair cables, the longest pair length shall be recorded as the length for the cable.

6.5 PERFORMANCE VERIFICATION

A. High speed unshielded twisted pair (UTP) data cable shall be performance verified using an automated test set. This test set shall be capable of testing for the continuity and length parameters defined above, and provide results for the following tests:

1. Near End Cross-Talk (NEXT)

2. Attenuation

3. Ambient Noise

4. Attenuation to Cross-Talk Ratio (ACR)

B. Test results shall be automatically evaluated by the equipment, using the most up-to-date criteria from the TIA/EIA Standard, and the result shown as pass/fail. Test results shall be printed directly from the test unit or from a download file using an application from the test equipment manufacturer. The printed test

results shall include all tests performed, the expected test result and the actual test result achieved.

6.6 FIBER

A. All fiber terminations shall be visually inspected with a minimum 200 X microscope to ensure that no surface imperfections exist after final polishing. In addition, each fiber strand shall be tested for attenuation with an optical power meter and light source. Cable length and splice attenuation shall be verified using an OTDR.

6.7 ATTENUATION

A. Horizontal distribution multimode optical fiber attenuation shall be measured at either 850 nanometers (nm) or 1300 nm using an LED light source and power meter. Backbone multimode fiber shall be tested at both 850 nm and 1300 nm in one direction. Test set-up and performance shall be conducted in accordance with ANSI/EIA/TIA-526-14 Standard, Method B. One 2-meter patch cord shall be used for the test reference and two 2-meter patch cords shall be used for the actual test. This test method uses a one jumper reference, two jumper test to estimate the actual link loss of the installed cables plus the loss of two connectors. This measurement is consistent with the loss which network equipment will see under normal installation and use. Test evaluation for the panel to panel (backbone) or panel to outlet (horizontal) shall be based on the values set forth in the EIA/TIA-568-A Annex H, Optical Fiber Link Performance Testing.

B. Where concatenated links are installed to complete a circuit between devices, the Contractor shall test each link from end to end to ensure the performance of the system. After the link performance test has been successfully completed, each link shall be concatenated and tested. The test method shall be the same used for the test described above. The evaluation criteria shall be established between the Owner and the Contractor prior to the start of the test.

C. Singlemode optical fiber attenuation shall be measured at 1310 nm and 1500 nm using a laser light source and power meter. Tests shall be performed at both wavelengths in one direction on each strand of fiber. The set-up and test shall be performed in accordance with EIA/TIA-526-7 Standard, Method 1A. Two meter patch cords shall be used as test references and for the actual test. This test method utilizes a one jumper reference, two jumper test to estimate the actual link loss of the install cable plus two patch cords.

D. Test evaluation for the panel to panel (backbone) shall be based on the values set forth in the EIA/TIA-568-A Annex H, Optical Fiber Link Performance Testing.

1. For this application, the length based on cable length measurements marked on the jacket, will be suitable. If OTDR testing is performed in accordance with 8.2.2, then the actual measured length shall be used. Conversion from metric to US Standard measurement shall use 3.2808 as a constant with the result rounded to the next highest whole number.

2 The testing for this project is measuring the loss over the installed cable plus two jumpers which accounts for three mated pairs of connectors.

Subtract one mated pair for the equipment interface to arrive at a total of two mated pairs under test.

6.8 LENGTH AND SPLICE LOSS

A. Each cable shall be tested with an Optical Time Domain Reflectometer (OTDR) to verify installed cable length and splice losses. The OTDR measurements for length shall be performed in accordance with EIA/TIA-455-60. The measurements to determine splice loss shall be performed in accordance with manufacturer's recommendations and best industry practices. These tests shall be employed where one or more of the following conditions exist.

1. OTDR and power meter testing is specifically requested by the Owner.

2. Each strand shall be tested on all outside plant and tight-buffered cables and/or where splices exist.

3. A representative strand of each fiber cable shall be tested to verify length if the estimated cable length is within 10% of the maximum length specified, respective to cable function, in the TIA/EIA-568-A Standard. 7.0 FIRESTOP SYSTEMS

A. A firestop system is comprised of: the item or items penetrating the fire rated structure; the opening in the structure and the materials and assembly of the materials used to seal the penetrated structure. Firestop systems comprise an effective block for fire, heat, vapor and pressurized water stream.

B. All penetrations through fire rated building structures (walls and floors) shall be sealed with an appropriate firestop system. This requirement applies to through penetrations (complete penetration) and membrane penetrations (through one side of a hollow fire rated structure). Any penetrating items i.e., riser slots and sleeves, cables, conduit, cable tray, and raceways, etc. shall be properly firestopped.

7.1 PRODUCT SPECIFICATIONS

A. Firestop systems shall be UL Classified to ASTM E814 (UL 1479) and shall be approved by a qualified Professional Engineer (PE), licensed (actual or reciprocal) in the state where the work is to be performed. A drawing showing the proposed firestopped system, stamped/embossed by the cognizant PE shall be provided to the Owner's Technical Representative prior to installing the firestop system.

7.2 FIRESTOP SYSTEM INSTALLATION

A. All firestop systems shall be installed in accordance with the manufacturer's recommendations and shall be completely installed and available for inspection by the local inspection authorities prior to cable system acceptance.

7.3 GROUNDING AND BONDING

A. The facility shall be equipped with a Telecommunications Bonding Backbone (TBB). This backbone shall be used to ground all telecommunications cable shields, equipment, racks, cabinets, raceways, and other associated hardware

that has the potential for acting as a current carrying conductor. The TBB shall be installed independent of the buildings electrical and building ground and shall be designed in accordance with the recommendations contained in the TIA/EIA-607 Telecommunications Bonding and Grounding Standard.

B. The main entrance facility/equipment room in each building shall be equipped with a telecommunications main grounding bus bar (TMGB). Each telecommunications closet shall be provided with a telecommunications ground bus bar (TGB). The TMGB shall be connected to the building electrical entrance grounding facility. The intent of this system is to provide a grounding system that is equal in potential to the building electrical ground system. Therefore, ground loop current potential is minimized between telecommunications equipment and the electrical system to which it is attached.

8.1 PRODUCT SPECIFICATIONS

A. All racks, metallic backboards, cable sheaths, metallic strength members, splice cases, cable trays, etc. entering or residing in the TC or ER shall be grounded to the respective TGB or TMGB using a minimum #6 AWG stranded copper bonding conductor and compression connectors. Where metallic panels attached to the rack to not have sufficient metal to metal contact to provide an adequate path to ground, they shall be bonded to the rack using a minimum #14 AWG copper conductor. The copper conductor size shall be upgraded based on the largest power conductor feeding any rack mount equipment. The conductor shall be continuous, attaching all isolated components in a daisy chain fashion from top to bottom and bonded to the rack using an appropriate compression connector.

B. All wires used for telecommunications grounding purposes shall be identified with a green insulation. Non-insulated wires shall be identified at each termination point with a wrap of green tape. All cables, and busbars shall be identified and labeled in accordance with the System Documentation Section of this specification.

9.1 SYSTEM DOCUMENTION

A. The following section describes the installation, administration, testing, and as-built documentation required to be produced and/or maintained by the contractor during the course of the installation. The documentation required will allow the owner to create a TIA/EIA 606 compliant administration system.

10.1 CABLE SYSTEM LABELING

A. The contractor shall develop and submit for approval a labeling system for this cable installation. At a minimum, the labeling system shall clearly identify all components of the system: racks, cables, panels and outlets. The labeling system shall designate the cables origin and destination and a unique identifier for the cable within the system. Racks and patch panels shall be labeled to identify the location within the cable system infrastructure. All labeling information shall be recorded on the as-built drawings and all test documents shall reflect the appropriate labeling scheme.

B. All label printing will be machine generated using indelible ink ribbons or cartridges. Self laminating labels will be used on cable jackets, appropriately sized to the OD of the cable, and placed within view at the termination point on each end. Outlet labels will be the manufacturer's label provided with the outlet assembly.

11.1 AS-BUILT DRAWINGS

A. The installation contractor will be provided with (two) set(s) of (D-)size drawings at the start of the project. One set will be designated for as the central location to document all as-built information as it occurs throughout the project. The central set will be maintained by the Contractor□s Foreman on a daily basis, and will be available to the Technical representative upon request during the course of the project. Anticipated variations from the build-to drawings may be for such things as cable routing and actual outlet placement. No variations will be allowed to the planned termination positions of horizontal and backbone cables, and grounding conductors unless approved in writing by the Owner. Contractor shall also redraw the site and floor plans showing all fiber, copper, racks, and information outlets as well as the labeling scheme for all items. These CAD drawings shall be on 81/2" x 11" sheets of paper and be turned over to the owner with the O&M manuals.

B. The Contractor shall provide the central drawing set to the owner at the conclusion of the project. The marked up drawing set will accurately depict the as-built status of the system including termination locations, cable routing, and all administration labeling for the cable system. In addition, a narrative will be provided that describes any areas of difficulty encountered during the installation that could potentially cause problems to the telecommunications system.

11.2 TEST DOCUMENTATION

A. Test documentation shall be provided in a three ring binder(s) within three weeks after the completion of the project. The binder(s) shall be clearly marked on the outside front cover and spine with the words "Test Results", the project name, and the date of completion (month and year). The binder shall be divided by major heading tabs, Horizontal ad Backbone. Each major heading shall be further sectioned by test type. Within the horizontal and backbone sections, scanner test results (Category 3, 4, or 5), fiber optic attenuation test results, OTDR traces, and green light test results shall be segregated by tab. Test data within each section shall be presented in the sequence listed in the administration records. The test equipment by name, manufacturer, model number and last calibration date will also be provided at the end of the document. Unless a more frequent calibration cycle is specified by the manufacturer, an annual calibration cycle is anticipated on all test equipment used for this installation. The test document shall detail the test method used and the specific settings of the equipment during the test.

B. Scanner tests shall be printed on 8-1/2" x 11". Hand written test results (attenuation results and green light results) shall be documented on the attached

test form (Appendix C). OTDR test results shall be printed or attached and copied on 8-1/2" x 11" paper for inclusion in the test documentation binder.

C. When repairs and re-tests are performed, the problem found and corrective action taken shall be noted, and both the failed and passed test data shall collocate in the binder.

11.3 WARRANTY AND SERVICES

A. The contractor shall provide a system warranty covering the installed cable system against defects in workmanship, components, and performance, and follow-on support after project completion.

11.4 INSTALLATION WARRANTY

A. The contractor shall warrant the cabling system against defects in workmanship for a period of one year from the date of system acceptance. The warranty shall cover all labor and materials necessary to correct a failed portion of the system and to demonstrate performance within the original installation specifications after repairs are accomplished. This warranty shall be provided at no additional cost to the Owner.

11.5 CABLE SYSTEM WARRANTY

A. FIBER:

Corning “EWP” manufacturer warranty required.

B. CAT 6 Structured Cabling System:

AMP ND & I manufacturer warranty required.

12.1 CABLE SYSTEM ACCEPTANCE

A. The Owner's Technical Representative will make periodic inspection of the project in progress. One inspection will be performed at the conclusion of cable pulling, prior to closing of the false ceiling, to inspect the method of cable routing and support, and the firestopping of penetrations. A second inspection will be performed at completion of cable termination to validate that cables were dressed and terminated in accordance with TIA/EIA specifications for jacket removal and pair untwist, compliance with manufacturer's minimum bend radius, and that cable ends are dressed neatly and orderly.

12.2 FINAL INSPECTION

A. Upon completion of the project, the Owner's Technical Representative will perform a final inspection of the installed cable system with the Contractor's Project Foreman. The final inspection will be performed to validate that all horizontal and backbone cables were installed as defined in the drawing package, and that the installation meets the aesthetic expectations of the Owner. The owner must be provided with proof that the contractor is a ND & I certified installer in good standing with Amp, equal by Lucent Technologies, Incorporated before the project will be signed off as complete.

12.3 TEST VERIFICATION

A. Upon receipt of the test documentation, the Owner reserves the right to perform spot testing of a representative of the cabling system to validate test results provided in the test document. Owner testing will use the same method employed by the contractor, and minor variations will be allowed to account for differences in test equipment. If significant discrepancies are found the Contractor will be notified for resolution.

12.4 SYSTEM PERFORMANCE

A. During the three week period between final inspection and delivery of the test and as-built documentation, the Owner will activate the cabling system. The Owner will validate operation of the cabling system during this period.

12.5 FINAL ACCEPTANCE

A. Completion of the installation and in-progress and final inspections, receipt of the test and as-built documentation, and successful performance of the system for a two week period will constitute acceptance of the system.

13 .0 NETWORK CABLING NOTES:

A. The electrical contractor shall provide a #6 building ground wire to each data rack from the corresponding building grounding electrode system. This ground will be connected to the MDF or IDF grounding bus for the grounding of all the telecommunications equipment.

B. Each RJ45 workstation outlet shall be provided with one patch cord for the rack location and one station cord for the future computer. See Section 3.3 for patch cord length and color information. These patch cords shall be of the same manufacturer as the cabling system.

END OF SECTION
2.0

NC STEM Center Modulars II
Phase B
Interior Renovations

****INCLUDES ELECTRICAL***

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

PROJECT CONTACTS

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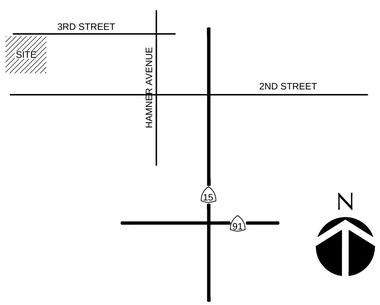
VICINITY MAP

PROJECT ADDRESS:

RIVERSIDE COMMUNITY COLLEGE
NORCO CAMPUS
2001 THIRD STREET
NORCO, CA 92860



REQUIRED FIELD INVESTIGATION

STEM CENTER MODULARS II - PHASE B - INTERIOR RENOVATIONS

IT IS THE CONTRACTOR'S RESPONSIBILITY THAT PRIOR TO BID, THAT HE/SHE PERFORM A THOROUGH FIELD INVESTIGATION OF THE EXISTING BUILDING(S) TO DETERMINE THE EXACT WORK REQUIRED TO ACCOMPLISH THE INTENT OF THIS CONTRACT.

THIS INVESTIGATION MUST INCLUDE, BUT IS NOT LIMITED TO THE FOLLOWING:

- VERIFICATION OF ALL EXISTING WALLS TO BE REMOVED.
- VERIFICATION OF ALL EXISTING DOORS, FRAMES & HARDWARE TO BE REMOVED.
- VERIFICATION OF ALL EXISTING WINDOWS & FRAMES TO BE REMOVED.
- VERIFICATION OF ALL EXISTING WALL HUNG CASEWORK TO BE REMOVED AND RE-INSTALLED.
- VERIFICATION OF ALL EXISTING BASE / WALL HUNG CASEWORK & COUNTER TOPS TO BE REMOVED.
- VERIFICATION OF ALL EXISTING PLUMBING FIXTURES TO BE REMOVED.
- VERIFICATION OF ALL EXISTING FINISH FLOORING TO BE REMOVED.
- VERIFICATION OF ALL EXISTING ELECTRICAL TO BE RELOCATED PER ELECTRICAL DRAWINGS.

SCOPE OF WORK

STEM CENTER MODULARS II - PHASE B - INTERIOR RENOVATIONS

IT IS THE INTENT OF THIS CONTRACT TO PROVIDE A FULLY FINISHED EXTERIOR UPGRADE TO THE EXISTING MODULAR BUILDING(S) LOCATED AT RIVERSIDE COMMUNITY COLLEGE NORCO CAMPUS.

THE SCOPE OF THIS PROJECT INCLUDES, BUT NOT LIMITED TO THE FOLLOWING:

BUILDING 200:

- PREPARATION AND RE-FINISHING OF INTERIOR WALL SURFACE WITH NEW TACK SURFACE OVER GWB AS NEEDED PER DRAWINGS.
- PREPARATION AND RE-FINISHING OF EXISTING FLOOR PER DRAWINGS AND SPECIFICATIONS.
- PREPARATION AND INSTALLATION OF NEW FINISH PAINT OVER TACK SURFACE PER DRAWINGS AND SPECIFICATIONS.
- INSTALLATION OF NEW EXTERIOR ROOM IDENTIFICATION SIGNAGE AND EXIT SIGNAGE.
- INSTALLATION OF NEW WHITE DRY ERASE BOARD.
- INSTALLATION OF NEW T-GRID CEILING AS SHOWN ON DRAWINGS.
- INSTALLATION OF NEW LIGHT FIXTURES PER DRAWINGS.
- INSTALLATION OF NEW CEILING MOUNTED PROJECTOR PER DRAWINGS.
- RELOCATION OF EXISTING ELECTRICAL OUTLETS AND INSTALLATION OF NEW ELECTRICAL / DATA PER DRAWINGS.
- INSTALLATION OF NEW 10" FLEX DUCTING TO EXISTING SYSTEM PER DRAWINGS.

BUILDING 300:

- INSTALLATION OF NEW WALL INFILL WHERE DOOR HAS BEEN REMOVED.
- INSTALLATION OF NEW TIMELY FRAME DOOR PER DRAWINGS.
- INSTALLATION OF NEW PLASTIC LAMINATE COUNTERTOP IN KITCHEN AREA.
- INSTALLATION OF NEW STAINLESS STEEL SINKS PER DRAWINGS.
- INSTALLATION OF NEW STAINLESS STEEL ROLL-UP DOOR PER DRAWINGS.
- PREPARATION AND RE-FINISHING OF INTERIOR WALL SURFACE WITH NEW TACK SURFACE OVER GWB AS NEEDED PER DRAWINGS.
- PREPARATION AND INSTALLATION OF NEW FINISH PAINT OVER TACK SURFACE PER DRAWINGS AND SPECIFICATIONS.
- PREPARATION AND INSTALLATION OF NEW FLOORING (GLUE DOWN CARPET, SHEET VINYL & NON-CONDUCTIVE) PER DRAWINGS.
- INSTALLATION OF NEW INTERIOR / EXTERIOR ROOM IDENTIFICATION SIGNAGE AND EXIT SIGNAGE PER DRAWINGS.
- INSTALLATION OF NEW FRP PANELS IN KITCHEN AND TOILET ROOM.
- INSTALLATION OF NEW WHITE DRY ERASE BOARDS.
- INSTALLATION OF NEW T-GRID CEILING AS NEEDED PER DRAWINGS.
- INSTALLATION OF NEW CEILING MOUNTED PROJECTORS PER DRAWINGS.

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APPLICABLE BUILDING CODES

APPLICABLE CODES

- 2013 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R. *
- 2013 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R. (2012 INTERNATIONAL BUILDING CODE VOLUMES 1-2 AND 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ELECTRICAL CODE (CEC) , PART 3, TITLE 24 C.C.R. (2011 NATIONAL ELECTRICAL CODE AND 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA MECHANICAL CODE (CMC), PART 4, TITLE 24 C.C.R. (2012 UNIFORM MECHANICAL CODE AND 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24 C.C.R. (2012 UNIFORM PLUMBING CODE AND 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA ENERGY CODE (CEC), PART 6, TITLE 24 C.C.R. *
- 2013 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R. (2012 INTERNATIONAL FIRE CODE AND 2013 CALIFORNIA AMENDMENTS)
- 2013 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
- 2013 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
- TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS
- 2007 ASME A17.1 (W/ A17.1a/CSA B44a-08 ADDENDA) SAFETY CODE FOR ELEVATORS AND ESCALATORS

PARTIAL LIST OF APPLICABLE STANDARDS

NFPA 13	AUTOMATIC SPRINKLER SYSTEMS	2013 EDITION
NFPA 14	STANDPIPE SYSTEMS	2013 EDITION
NFPA 17	DRY CHEMICAL EXTINGUISHING SYSTEMS	2013 EDITION
NFPA 17A	WET CHEMICAL SYSTEMS	2013 EDITION
NFPA 20	STATIONARY PUMPS	2013 EDITION
NFPA 22	WATER TANKS FOR PRIVATE FIRE PROTECTION	2013 EDITION
NFPA 24	PRIVATE FIRE MAINS	2013 EDITION
NFPA 72	NATIONAL FIRE ALARM CODE	2013 EDITION
(NOTE:	SEE UL STANDARD 1971 FOR "VISUAL DEVICES")	
NFPA 80	FIRE DOOR AND OTHER OPENINGS PROTECTIVES	2013 EDITION
NFPA 92	STANDARD FOR SMOKE CONTROL SYSTEMS	2012 EDITION
NFPA 253	CRITICAL RADIANT FLUX OF FLOOR COVERING SYSTEMS	2006 EDITION
NFPA 2001	CLEAN AGENT FIRE EXTINGUISHING SYSTEMS	2012 EDITION
ICC 300	ICC STANDARDS ON BLEACHERS, FOLDING AND TELESCOPING SEATING, AND GRAND STANDS	2005 EDITION
UL 300	FIRE TESTING OF FIRE EXTINGUISHING SYSTEMS FOR PROTECTION OF RESTAURANT COOKING AREAS	2005 EDITION
UL 464	AUDIBLE SIGNAL APPLIANCES	2003 EDITION
UL521	HEAT DETECTORS FOR FIRE PROTECTIVE SIGNALING SYSTEMS	1999 EDITION

REFERENCE CODE SECTION FOR NFPA STANDARDS-2013 CBC (SFM) CHAPTER 35. SEE CHAPTER 35 FOR STATE OF CALIFORNIA AMENDMENTS TO NFPA STANDARDS

*ALL PARTS OF THE 2013 CALIFORNIA BUILDING CODE BECOMES EFFECTIVE JANUARY 1, 2013 EXCEPT THE EFFECTIVE DATE FOR THE USE OF THE 2013 BUILDING ENERGY EFFICIENCY STANDARDS (TITLE 24, PART 1, CHAPTER 10 AND PART 6, AND AFFECTED PROVISIONS IN PART 11)CAL. GREEN BUILDING STANDARDS CODE)) IS JULY 1, 2014 AND THE EFFECTIVE DATE FOR CALIFORNIA ADMINISTRATIVE CODE, PART 1, TITLE 24 IS FEBRUARY 28, 2013

GENERAL CONSTRUCTION NOTES

1. CONTRACTOR SHALL VISIT THE SITE PRIOR TO BIDDING AND SHALL DETERMINE ANY DISCREPANCIES BETWEEN THESE DRAWINGS AND ACTUAL FIELD CONDITIONS.
2. CONTRACTOR SHALL THOROUGHLY INVESTIGATE, VERIFY AND BEAR RESPONSIBILITY FOR DIMENSIONS AND EXISTING CONDITIONS. CONTRACTOR SHALL NOTIFY ARCHITECT OF ANY CONDITION REQUIRING MODIFICATION OR CHANGE PRIOR TO STARTING WORK.
3. CONTRACTOR SHALL VERIFY SITE TOPOGRAPHY WITH WORK SHOWN ON THESE DRAWINGS. THE INTENT IS TO PROVIDE SUFFICIENT DRAINAGE AWAY FROM BUILDINGS.
4. WHERE EXISTING FINISHES, FACILITIES, AND SURFACES ARE DISTURBED, DAMAGED, OR REMOVED DURING THE COURSE OF CONSTRUCTION OPERATIONS, THE CONTRACTOR IS TO REPAIR OR REPLACE AS NECESSARY TO MATCH EXISTING. ALL NEW MATERIALS SHALL MATCH EXISTING IN ALL RESPECTS.
5. THE CONTRACTOR SHALL NOTIFY THE DISTRICT IMMEDIATELY WHERE THIS WORK AFFECTS THE EXISTING IRRIGATION SYSTEMS THE CONTRACTOR SHALL PERFORM ANY WORK NECESSARY TO MAINTAIN A COMPLETE OPERATING SYSTEM.
6. LOCATIONS OF UTILITIES, WHERE SHOWN, ARE APPROXIMATE, AND CONTRACTOR SHALL EXERCISE EXTREME CAUTION IN EXCAVATING AND TRENCHING ON ALL SITES TO AVOID EXISTING DUCTS, PIPING, OR CONDUITS, ETC, AND TO PREVENT HARM TO PERSONNEL AND/OR DAMAGE TO EXISTING UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER SHOULD UNIDENTIFIED CONDITIONS BE DISCOVERED. THESE DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE NECESSARY COMPONENTS FOR CONSTRUCTION SAFETY.
7. CONTRACTORS WORKERS WILL ONLY BE ALLOWED IN THE AREAS APPROPRIATE TO THE WORK AND SHALL NOT DISTURB THE STUDENTS OR FACULTY.
8. ALL WORKERS SHALL WEAR APPROPRIATE SAFETY GEAR & COMPLY WITH SAFETY REGULATIONS.
9. DRESS & BEHAVIOR OF ALL CONSTRUCTION WORKERS SHALL BE APPROPRIATE TO A SCHOOL SITE AND BE ACCEPTABLE TO DISTRICT REPRESENTATIVES.
10. SMOKING IS NOT PERMITTED ON SCHOOL SITES.
11. THERE SHALL BE NO POSSESSION OR CONSUMPTION OF DRUGS OR ALCOHOLIC BEVERAGES ON THE JOB SITE BY ANY PERSON AT ANY TIME.
12. A CLASS 3 PROJECT INSPECTOR EMPLOYED BY THE DISTRICT (OWNER) AND APPROVED BY THE DIVISION OF THE STATE ARCHITECT SHALL PROVIDE CONTINUOUS INSPECTION OF THE WORK. THE DUTIES OF THE INSPECTOR ARE DEFINED IN SECTION 4-342, PART 1, TITLE 24, (CCR).
13. ALL WORK SHALL CONFORM TO TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR).
14. CHANGES TO THE APPROVED DRAWINGS & SPECIFICATIONS SHALL BE MADE BY AN ADDENDA OR A CHANGE ORDER APPROVED BY THE DIVISION OF THE STATE ARCHITECT, AS REQUIRED BY SECTION 4-338 PART 1 TITLE 24, (CCR).
15. THE CONTRACTOR SHALL PROVIDE CLEAN, SANITARY, TEMPORARY TOILET FACILITIES FOR THE CONSTRUCTION PERSONNEL. UNDER NO CIRCUMSTANCES SHALL CONSTRUCTION PERSONNEL BE ALLOWED TO UTILIZE THE PERMANENT SCHOOL RESTROOM FACILITIES. ALL TEMPORARY FACILITIES SHALL BE REMOVED FROM THE SITE AT THE CONCLUSION OF CONSTRUCTION.
16. DOOR HARDWARE:
MOUNTING HEIGHT OF LATCHING HARDWARE SHALL BE 30" TO 44" A.F.F. PER CBC SEC. 1133B.2.5.2. PER CBC SEC. 1133B.2.5.2. PRESSURE TO OPERATE THE DOOR SHALL NOT EXCEED THE FOLLOWING:

EXTERIOR DOORS: 5 POUNDS
INTERIOR DOORS: * 5 POUNDS
FIRE RATED DOORS: 5 POUNDS

* THE MAXIMUM EFFORT TO OPERATE A FIRE RATED DOOR MAY BE INCREASED TO THE MAXIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY, NOT TO EXCEED 15 LBS. 1133B.2.5.

DOOR CLOSER WHEN PROVIDED THEN THE SWEEP PERIOD OF THE CLOSER SHALL BE ADJUSTED TO SO THAT FROM AN OPEN POSITION OF 70 DEGREES, THE DOOR WILL TAKE AT LEAST 3 SECONDS TO MOVE TO A POINT 3" FROM THE LATCH, MEASURED TO THE LANDING SIDE OF THE DOOR. 1133B.2.5.1.

ALL HARDWARE SHALL MEET THE REQUIREMENTS OF CBC SECTION 1133B.2.1, 1133B.2.5.1 AND 1003.3.1.8.

ALL DOORS TO CLASSROOMS AND ANY OTHER ROOM WITH AN OCCUPANCY OF FIVE (5) OR MORE PERSONS SHALL HAVE HARDWARE THAT ALLOWS THE DOOR TO BE LOCKED FROM THE INSIDE, SEE DSA BULLETIN (BU) 11-05 FOR MORE INFORMATION.

THRESHOLDS SHALL COMPLY WITH CBC SECTION 1133B.2.4.1.

FLOOR STOPS SHALL NOT BE LOCATED IN THE PATH OF TRAVEL AND 4" MAXIMUM FROM WALLS. POLICY 99-08.

17. EXIT DEVICES: PANIC HARDWARE SHALL COMPLY WITH IBC SECTION 1008.1.9, CONSIDER THAT IF THE DEVICE IS MOUNTED LOWER THAN 36" AFF, THE CLEAR OPENING MAY BE RESTRICTED TO LESS THAN THE 32" CLEAR OPENING REQUIRED. CLEAR OPENING SHALL BE MOUNTED ABOVE 36" TO 42" ABOVE FINISHED FLOOR SURFACE. THE UNLATCHING FORCE SHALL NOT EXCEED 15 LBS. (66.72N) APPLIED IN THE DIRECTION OF TRAVEL.
18. SAFETY DURING CONSTRUCTION AND DEMOLITION SHALL FOLLOW CBC CHAPTER 33 AND CFC CHAPTER 14.
19. DETERIORATION OR EXISTING NON-COMPLIANT: IF ANY CONDITION IS DISCOVERED WHICH, LEFT UN- CORRECTED, WOULD MAKE THE BUILDING NON-COMPLIANT WITH THE REQUIREMENTS OF THE EDITION OF THE CBC IN FORCE AT THE TIME OF ORIGINAL CONSTRUCTION, THE CONDITION MUST BE CORRECTED IN ACCORDANCE WITH CURRENT CODE REQUIREMENTS. A CHANGE ORDER, OR A SEPARATE SET OF PLANS AND SPECIFICATIONS DETAILING AND SPECIFYING THE REQUIRED REPAIR WORK SHALL BE SUBMITTED TO AND APPROVED BY DSA BEFORE PROCEEDDING WITH THE REPAIR WORK.
20. TITLE 24 PARTS 1-5 MUST BE KEPT ON SITE DURING CONSTRUCTION.
21. GRADING PLANS, DRAINAGE IMPROVEMENTS, ROAD AND ACCESS REQUIREMENTS AND ENVIRONMENTAL HEALTH CONSIDERATIONS SHALL COMPLY WITH LOCAL ORDINANCES.

GENERAL DEMOLITION NOTES

1. GENERAL CONTRACTOR SHALL COORDINATE THE DEMOLITION WITH THE OWNER/TENANT PRIOR TO THE START OF WORK.
2. AFTER DEMOLITION IS COMPLETE, PREPARE THE AFFECTED SURFACES FOR NEW CONSTRUCTION.
3. PROVIDE AND MAINTAIN TEMPORARY AND PERMANENT BARRICADES, LIGHTING AND GUARDRAILS AS REQUIRED BY APPLICABLE CODES AND REGULATIONS.
4. IF DEMOLITION IS PERFORMED IN EXCESS OF THAT REQUIRED, RESTORE AFFECTED AREAS TO THEIR ORIGINAL CONDITION WITH MATERIALS OF LIKE KIND AND QUALITY AT NO COST TO THE OWNER.
5. EXISTING MATERIALS THAT ARE DAMAGED AS A RESULT OF THE DEMOLITION OR CONSTRUCTION WORK SHALL BE RESTORED TO THEIR ORIGINAL CONDITION OR REPLACED WITH MATERIALS OR LIKE KIND AND QUALITY AT NO COST TO THE OWNER.
6. CLEAN ALL SURFACES AND AREAS OF DUST, DIRT AND DEBRIS CAUSED BY THE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE START OF DEMOLITION.
7. UPON COMPLETION OF WORK, THE CONTRACTOR SHALL LEAVE THE AREA CLEAR AND PREPARED FOR THE NEW CONSTRUCTION.
8. ERECT AND MAINTAIN TEMPORARY DUST-PROOF PARTITION TO PREVENT THE SPREAD OF DUST, FUMES, SMOKE, ETC. TO OTHER PARTS OF THE BUILDING. MAINTAIN THE SEPARATION THROUGHOUT THE CONSTRUCTION AS NECESSARY.
9. PROTECT IN PLACE, ALL ITEMS/AREAS/SURFACES/LANDSCAPING NOT SCHEDULED FOR DEMOLITION.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEMOLITION OF ALL ITEMS IN THE WAY OF THE PROPOSED CONSTRUCTION, WHETHER OR NOT KEYNOTED OR ILLUSTRATED IN THESE DOCUMENTS.
11. IF TENANT/OWNER WILL OCCUPY THE FACILITY DURING DEMOLITION, THE CONTRACTOR SHALL MAINTAIN ALL SERVICES OPERATIONAL AND COORDINATE DOWN TIMES WITH THE TENANT/OWENR PRIOR TO PERFORMING ANY WORK.
12. ALL SYSTEMS, ELECTRICAL, SEWER, WATER, FIRE ALARM, FIRE WATER, GAS, ETC. SHALL REMAIN OPERATIONAL DURING AND AFTER DEMOLITION IS COMPLETE, UNLESS OTHERWISE NOTED OR AUTHORIZED BY THE OWNER OR ARCHITECT IN WRITING.
13. UTILITIES ASSOCIATED WITH ANY ITEMS SCHEDULED FOR DEMOLITION SHALL BE CAPPED OFF IN WALLS OR BELOW THE FLOOR SLAB UNLESS NOTED OTHERWISE.
14. SEE ELECTRICAL PLANS FOR LOCATIONS OF EXISTING ELECTRICAL PANELS TO BE PROTECTED IN PLACE, RELOCATED OR DEMOLISHED.

PROJECT BID ALLOWANCES

THE CONTRACTOR SHALL INCLUDE IN HIS BID AN ALLOWANCE OF $7,500.00 (SEVEN THOUSAND AND FIVE HUNDRED DOLLARS AND NO/100) TO COVER COSTS OF MISCELLANEOUS COSTS WHICH ARE UNDETERMINED AT THIS TIME. ALL ADDITIONAL WORK SHALL BE COORDINATED WITH THE ARCHITECT AND DISTRICT AND BE SUBJECT TO APPROVAL PRIOR TO COMMENCING WORK. OTHER WORK DEEMED NECESSARY MAY BE CHARGED AGAINST THE ALLOWANCE.

CONTRACTOR SHALL CREDIT ANY UNUSED PORTION OF THE ALLOWANCES UPON THE COMPLETION OF THE PROJECT.

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NC STEM Center Modulars II

Phase B

Interior Renovations

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2 DATE:
3 DATE:

CHECKED BY: D.W.H DRAWN BY: B.J.H.
DATE: MAY, 2014

SHEET TITLE:

TITLE SHEET

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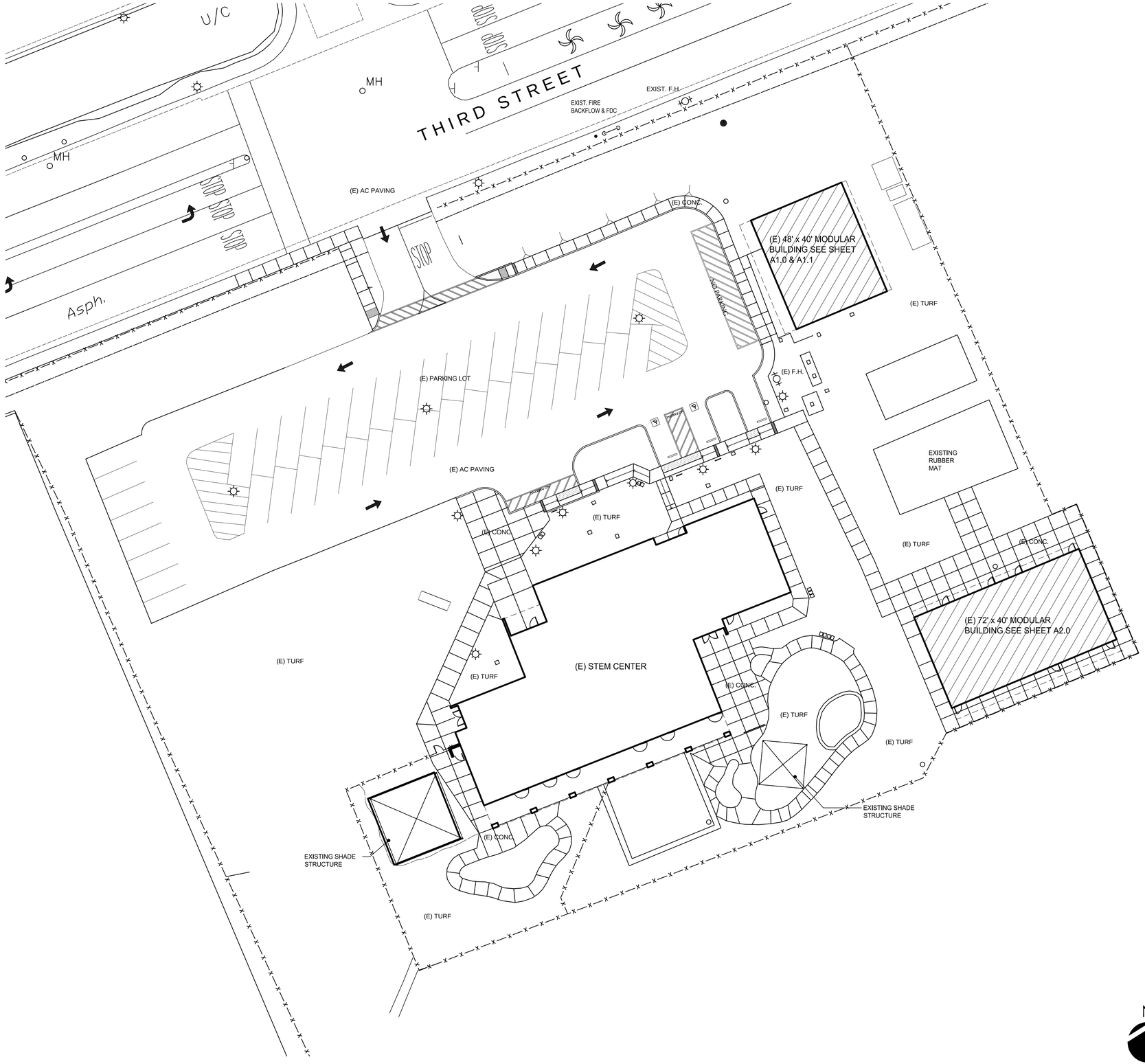

OVERALL SITE PLAN | 20' | 29

SITE PLAN LEGEND

- EXISTING BUILDINGS
- EXISTING PAVING
- EXISTING MODULAR BUILDING TO HAVE INTERIOR UPGRADES
- —— x —— x —— EXISTING C.L. FENCE / GATES - U.N.O.

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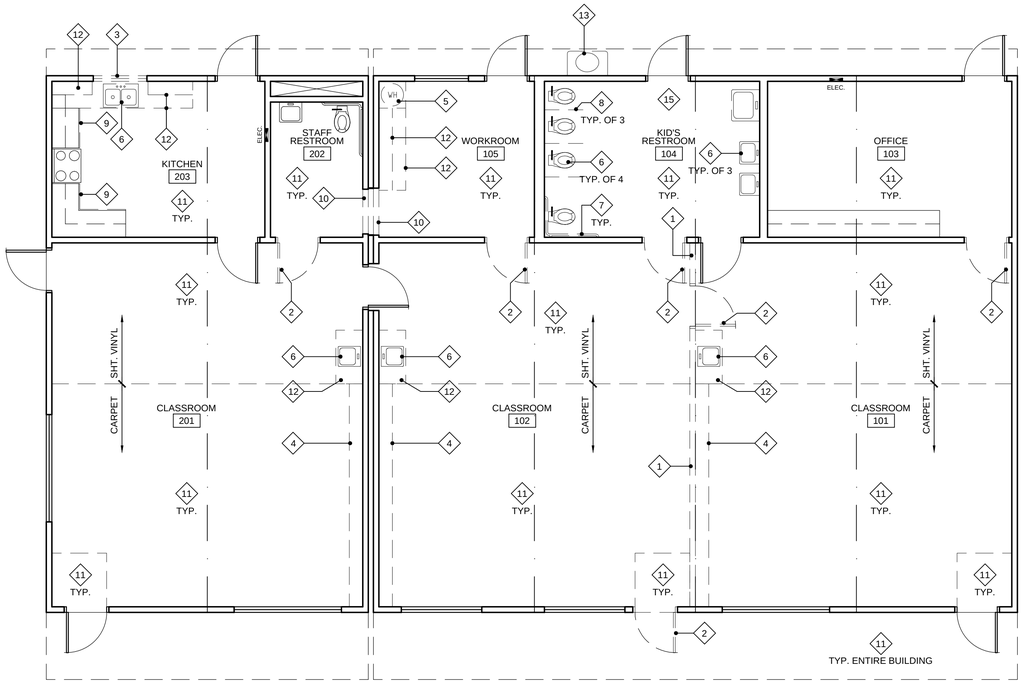
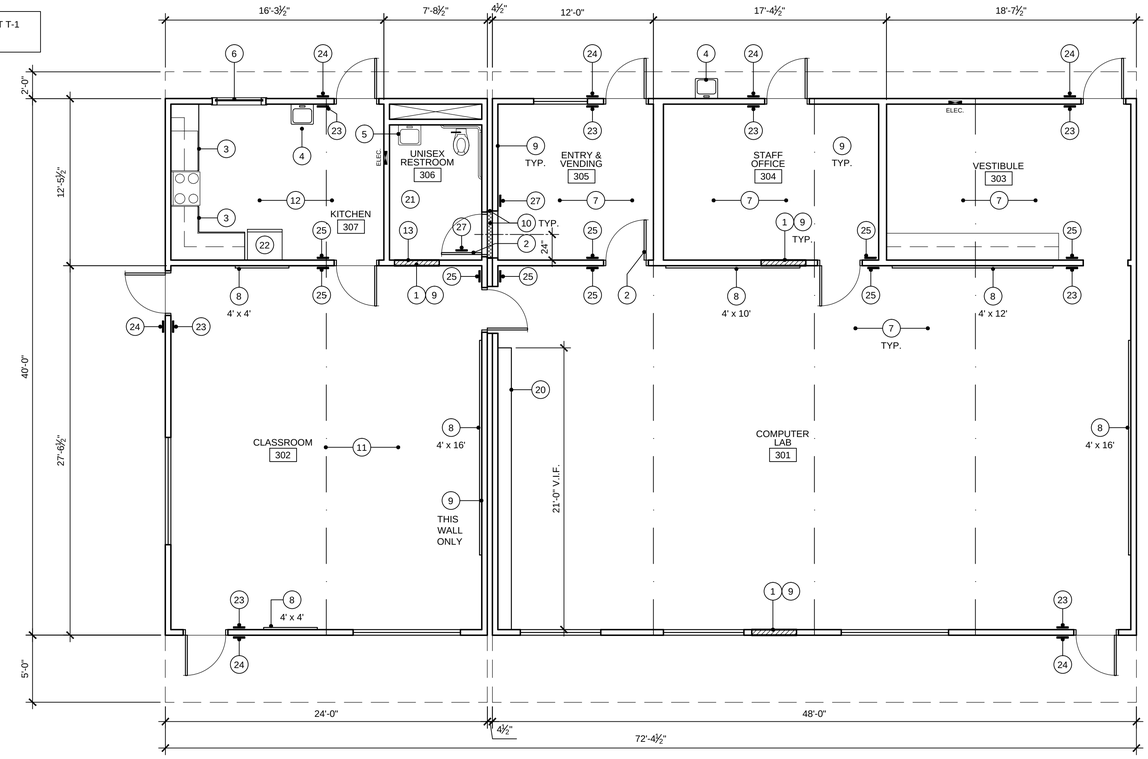
SEE GENERAL DEMOLITION NOTES ON SHEET T-1 FOR MORE INFORMATION.



BUILDING 300 - DEMOLITION FLOOR PLAN

3/16" | 9

SEE GENERAL CONSTRUCTION NOTES ON SHEET T-1 FOR MORE INFORMATION.



BUILDING 300 - NEW FLOOR PLAN

3/16" | 19

DEMO FLOOR PLAN KEYNOTES

1. (E) 2x WOOD STUD WALL TO BE REMOVED.
2. (E) DOOR, FRAME AND HARDWARE TO BE REMOVED.
3. (E) EXTERIOR WINDOW FRAME AND GLAZING TO BE REMOVED. AT KITCHEN: FRAME TO BE PROTECTED IN PLACE, LOWER (E) SILL AS NEEDED TO ACCOMMODATE 34" MAX. HEIGHT STAINLESS STEEL SERVING COUNTER.
4. (E) BASE / WALL HUNG CASEWORK TO BE REMOVED. SALVAGE WALL HUNG CASEWORK AS NEEDED FOR RE-INSTALLATION PER NEW FLOOR PLAN.
5. (E) WATER HEATER TO BE REMOVED. CAP UTILITIES BEHIND WALL.
6. (E) PLUMBING FIXTURE TO BE REMOVED. CAP ALL SEWER & WATER LINES BEHIND WALLS & UNDER FLOOR.
7. (E) TOILET ROOM ACCESSORIES TO BE REMOVED IN THE ENTIRE ROOM.
8. (E) TOILET PARTITION TO BE REMOVED.
9. (E) PLASTIC LAMINATE COUNTER TOP TO BE REMOVED. BASE CASEWORK TO REMAIN, PROTECT IN PLACE.
10. REMOVE PORTION OF (E) ADJACENT WALLS FOR (N) DOOR OPENING. SEE NEW FLOOR PLAN. REMOVE PLUMBING AND CAP UTILITIES AS REQUIRED.
11. (E) FLOOR FINISH TO BE REMOVED.
12. (E) CASEWORK TO BE REMOVED AND DISPOSED OF.
13. (E) STAINLESS STEEL SINK TO BE REMOVED, MODIFY (E) PLUMBING AS REQUIRED FOR INSTALLATION OF NEW SINK.
14. (E) INTERIOR SIGNAGE TO BE REMOVED.
15. (E) FRP PANELS IN THIS ROOM TO BE REMOVED.

* ALL ITEMS NOT CALLED OUT FOR REMOVAL ON THE DEMOLITION FLOOR PLAN ARE TO REMAIN AND TO BE PROTECTED IN PLACE.

NEW FLOOR PLAN KEYNOTES

1. (N) WOOD STUD WALL INFILL PER 3/A3.0
2. (N) 3068 INTERIOR TIMELY PRE-FINISHED DOOR, FRAME & PRIVACY HARDWARE TO MATCH EXISTING.
3. (N) PLASTIC LAMINATE COUNTER TOP & BACK-SPLASH AT (E) BASE CASEWORK. VERIFY DIMENSIONS IN FIELD PRIOR TO CONSTRUCTION.
4. (N) STAINLESS STEEL SINK, BY JUST MANUFACTURING CO., MODEL NO. A-544-912 OR EQUAL. INSTALL PER 1/A3.1 PROVIDE INSTAHOT WATER HEATER SYSTEM PER ELECTRICAL DWGS.
5. PROVIDE INSTAHOT WATER HEATER SYSTEM AT (E) SINK PER ELECTRICAL DRAWINGS. MAKE ALL REQUIRED PLUMBING MODIFICATIONS.
6. (N) STAINLESS STEEL FRAMED ROLL-UP DOOR AT SERVING COUNTER BY ALPINE OVERHEAD DOORS, INC., INTEGRAL FRAME - SPLIT FRAME MODEL. 7/A3.0 PATCH INTERIOR AND EXTERIOR FINISH SURFACES AS REQUIRED, SEE NEW FLOOR PLAN GENERAL NOTES.
7. (N) NON- CONDUCTIVE FLOORING WITH TOP SET RUBBER BASE, PREP FLOOR AS REQUIRED AND FILL IN ALL VOIDS AND DAMAGED AREAS FROM PLUMBING FIXTURES AS NEEDED TO PROVIDE A UNIFORM AND LEVEL SURFACE. SEE SPECIFICATIONS.
8. (N) DRY ERASE WHITE BOARD. 20/A3.0
9. (N) VINYL TACK SURFACE AT INTERIOR WALLS TO BE ADHERED OVER ½" GWB PER 10/A3.0
10. (N) THRESHOLD CLOSURE AT MODULAR SEPARATION PER 13/A3.0 19/A3.0
11. (N) GLUE DOWN CARPET WITH TOP SET RUBBER BASE, PREP FLOOR AS REQUIRED AND FILL ALL VOIDS AND DAMAGED AREAS AS NEEDED TO PROVIDE A UNIFORM AND LEVEL SURFACE. SEE SPECIFICATIONS.
12. (N) SHEET VINYL FLOORING WITH COVED BASE, PREP FLOOR AS REQUIRED AND FILL IN ALL VOIDS AND DAMAGED AREAS AS NEEDED TO PROVIDE A UNIFORM AND LEVEL SURFACE. SEE SPECIFICATIONS.
13. (N) FULL HEIGHT F.R.P. OVER ½" WATER RESISTANT GWB AT THIS WALL.
14. NOT USED.
15. NOT USED.
16. NOT USED.
17. NOT USED.
18. NOT USED.
19. (N) FIRE EXTINGUISHER CABINET PER 14/A3.0
20. (N) LOCATION FOR EXISTING WALL HUNG CASEWORK. SEE DETAIL 16/A3.0 18/A3.0
21. (N) SHEET VINYL FLOORING WITH COVED BASE.
22. (N) REFRIGERATOR BY OWNER.
23. (N) EXIT SIGNAGE PER 7/A3.1
24. (N) EXTERIOR ROOM IDENTIFICATION SIGNAGE PER 8/A3.1
25. (N) INTERIOR ROOM IDENTIFICATION SIGNAGE PER 9/A3.1
26. NOT USED.
27. (N) UNISEX RESTROOM SIGNAGE PER 13/A3.1

NEW FLOOR PLAN GENERAL NOTES

1. PROVIDE (N) FULL HEIGHT VINYL TACK SURFACE AT INTERIOR WHERE ANY (E) SECTIONS HAVE BEEN DAMAGED DUE TO DEMOLITION AND/OR (N) CONSTRUCTION. KITCHEN AND TOILET ROOM TO HAVE FRP PANELS. 10/A3.0
2. MAINTAIN ALL EXISTING ELECTRICAL AND DATA OUTLETS IN THIS BUILDING. PROVIDE NEW COVER PLATES AND RE-IDENTIFY ALL DATA PORTS TO MATCH ORIGINAL EXISTING DESIGNATIONS.
3. PROVIDE (N) FULL HEIGHT T-111 PANELS AT EXTERIOR WALLS WHERE INFILL OCCURS OR WHERE DAMAGED PANELS NEED TO BE REPLACED.
4. PROVIDE THRESHOLD BETWEEN FINISH FLOORING TYPES PER 16/A3.0

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DATE: MAY, 2014

SHEET TITLE:
BUILDING 300 - DEMOLITION & NEW FLOOR PLANS

SHEET NO:
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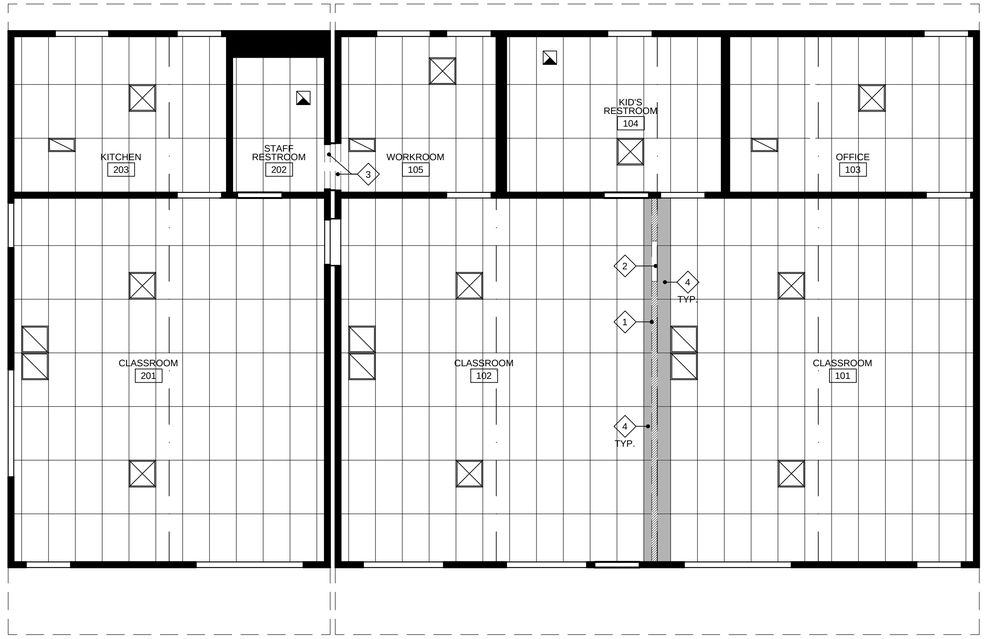
SEE GENERAL DEMOLITION NOTES ON SHEET T-1 FOR MORE INFORMATION.



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DEMO REFL'D. CEILING PLAN KEYNOTES

1. (E) STEEL FRAMED WALL TO BE REMOVED PER DEMO FLOOR PLAN, SEE 9/A1.0.
2. (E) HEADER TO BE REMOVED.
3. PORTION OF (E) WALLS TO BE REMOVED, SEE 9/A1.0 FOR MORE INFORMATION.
4. (E) 2x4 T-GRID CEILING SYSTEM AND TILES TO BE REMOVED.

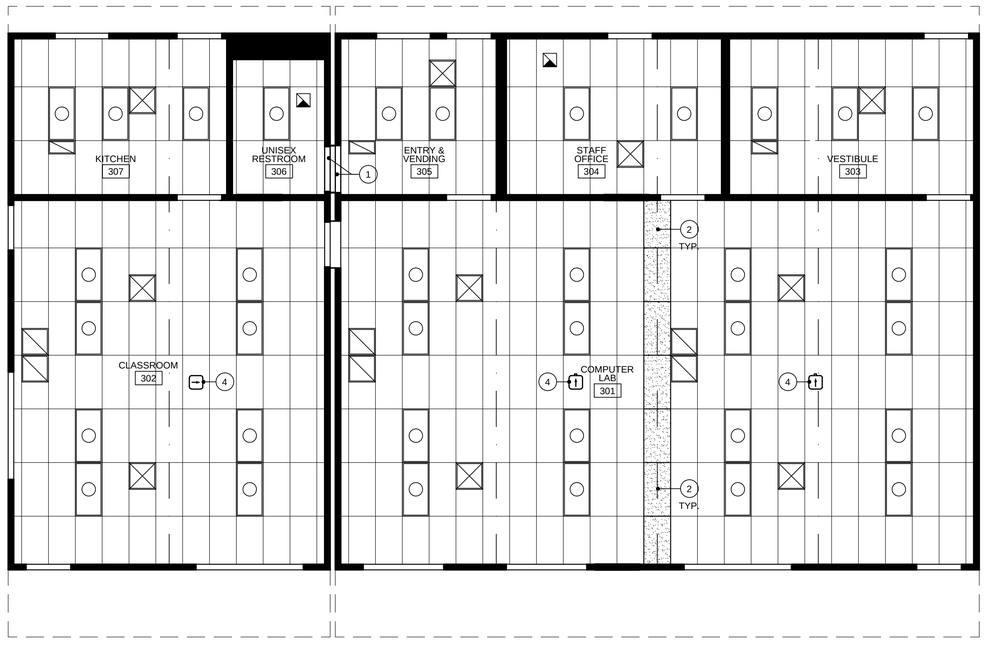
* ALL ITEMS NOT CALLED OUT FOR REMOVAL ON THE DEMOLITION REFLECTED CEILING PLAN ARE TO REMAIN AND TO BE PROTECTED IN PLACE.

DEMO REFL'D. CEILING PLAN LEGEND

- (E) STUD WALL TO REMAIN, PROTECT IN PLACE.
- (E) STUD WALL TO BE REMOVED PER DEMO FLOOR PLAN, SEE 9/A1.0.
- (E) CEILING GRID TO REMAIN, PROTECT IN PLACE.
- (E) 2x4 CEILING GRID TO BE REMOVED.
- (E) 2x4 FLUORESCENT LIGHT FIXTURE TO REMAIN, PROTECT IN PLACE.
- (E) MECHANICAL DIFFUSERS & GRILLS TO REMAIN, PROTECT IN PLACE.
- (E) EXHAUST FAN TO REMAIN, PROTECT IN PLACE.

BUILDING 300 - DEMOLITION REFLECTED CEILING PLAN | 3/16" | 9

SEE GENERAL CONSTRUCTION NOTES ON SHEET T-1 FOR MORE INFORMATION.



N

NEW REFL'D. CEILING PLAN KEYNOTES

1. (N) HEADER / JAMB PER (12 / A3.0)
2. (N) 2x4 T-GRID CEILING SYSTEM AND TILES TO MATCH EXISTING PER (1 / A4.0)
3. (N) STEEL FRAMED WALL TO BOTTOM OF CEILING SYSTEM PER NEW FLOOR PLAN.
4. (N) CEILING MOUNTED PROJECTOR SYSTEM, SEE ELECTRICAL DRAWINGS.

NEW REFL'D. CEILING PLAN LEGEND

- (E) STUD WALL, PROTECT IN PLACE.
- (E) CEILING GRID, PROTECT IN PLACE.
- (N) 2x4 CEILING GRID PER (1 / A4.0)
- (E) 2x4 FLUORESCENT LIGHT FIXTURE, PROTECT IN PLACE.
- (E) MECHANICAL DIFFUSERS & GRILLS, PROTECT IN PLACE.
- (E) EXHAUST FAN TO REMAIN, PROTECT IN PLACE.
- (N) CEILING MOUNTED PROJECTOR SYSTEM, SEE ELECTRICAL DRAWINGS.

BUILDING 300 - NEW REFLECTED CEILING PLAN | 3/16" | 19

HCA

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CONSULTANT:

CLIENT:

NC STEM Center Modulars II

Phase B

Interior Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

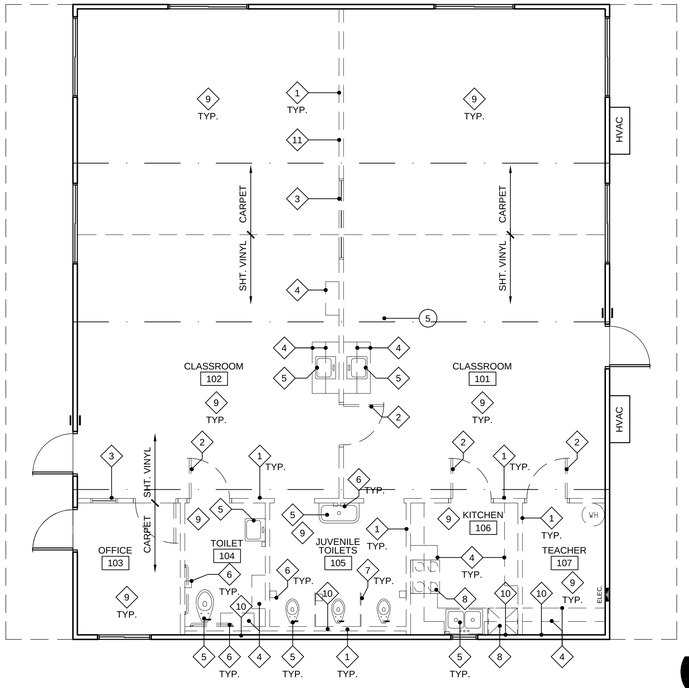
REVISIONS:
1 DATE:
2 DATE:
3 DATE:
CHECKED BY: D.W.H DRAWN BY: B.J.H.
DATE: MAY, 2014

SHEET TITLE:
BUIDLING 300 - DEMO & NEW RFL'D CEILING PLANS

SHEET NO:
A1.1

10286 / 03_FP01-02_PHASE IIB

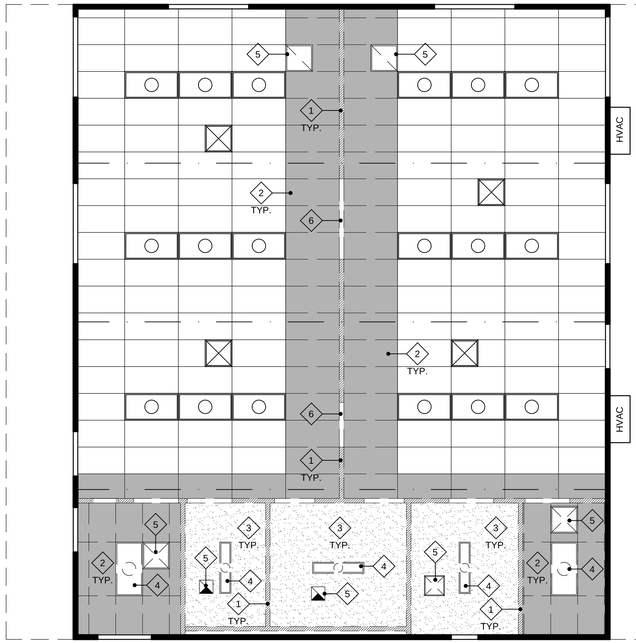
SEE GENERAL DEMOLITION NOTES ON SHEET T-1 FOR MORE INFORMATION.



BUILDING 200 - DEMO FLOOR PLAN

3/16" | 7

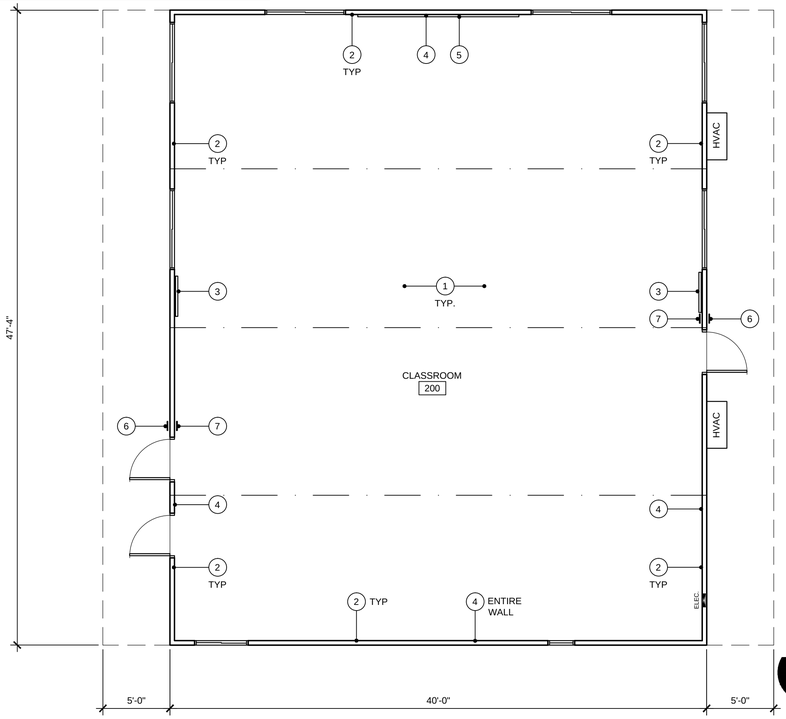
SEE GENERAL DEMOLITION NOTES ON SHEET T-1 FOR MORE INFORMATION.



BUILDING 200 - DEMO REFLECTED CEILING PLAN

3/16" | 9

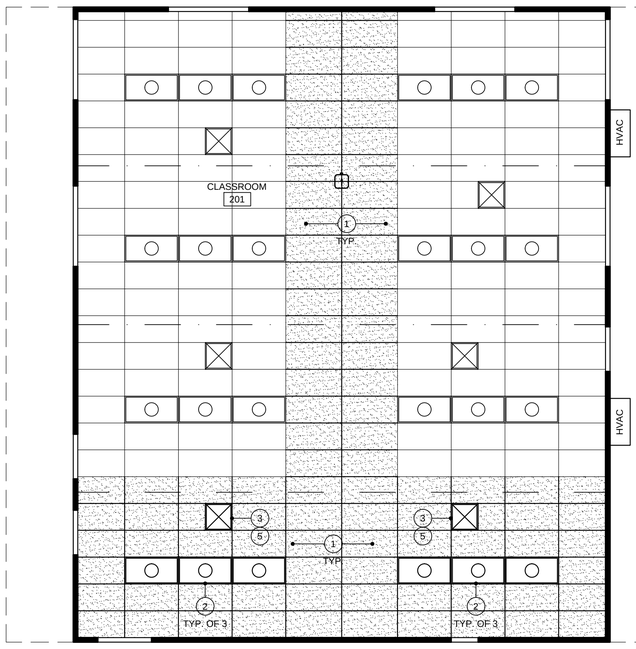
SEE GENERAL CONSTRUCTION NOTES ON SHEET T-1 AND NEW FLOR PLAN GENERAL NOTES ON SHEET A1.0 FOR MORE INFORMATION.



BUILDING 200 - NEW FLOOR PLAN

3/16" | 17

SEE GENERAL CONSTRUCTION NOTES ON SHEET T-1 FOR MORE INFORMATION.



BUILDING 200 - NEW REFLECTED CEILING PLAN

3/16" | 19

DEMO FLOOR PLAN KEY NOTES

1. (E) INTERIOR STUD WALL TO BE REMOVED.
2. (E) DOOR AND HARDWARE TO BE REMOVED.
3. (E) WINDOW AND FRAME TO BE REMOVED.
4. (E) BASE / WALL HUNG CASEWORK TO BE REMOVED.
5. (E) PLUMBING FIXTURE TO BE REMOVED. CAP UTILITIES AS REQUIRED.
6. (E) TOILET ROOM ACCESSORIES TO BE REMOVED.
7. (E) TOILET PARTITION TO BE REMOVED.
8. (E) KITCHEN EQUIPMENT TO BE REMOVED.
9. (E) FLOOR FINISH TO BE REMOVED.
10. (E) WALL FINISH & RUBBER BASE TO BE REMOVED AT THIS WALL.
11. RELOCATE (E) THERMOSTAT AND ANY OTHER (E) ELECTRICAL ITEMS PER ELEC. PLANS.
12. (E) WATER HEATER TO BE REMOVED. CAP UTILITIES BEHIND WALL.

* ALL ITEMS NOT CALLED OUT FOR REMOVAL ON THE DEMOLITION FLOOR PLAN ARE TO REMAIN AND TO BE PROTECTED IN PLACE.

DEMO REFL'D. CEILING PLAN KEY NOTES

1. (E) INTERIOR STUD WALL TO BE REMOVED PER DEMO FLOOR PLAN, SEE 7/A2.0.
2. (E) 2x4 T-GRID CEILING SYSTEM TO BE REMOVED.
3. (E) GYPSUM BOARD CEILING & FRAMING TO BE REMOVED.
4. (E) FLUORESCENT LIGHT FIXTURE TO BE REMOVED. 2' X 4' FIXTURE(S) TO BE REUSED.
5. (E) MECHANICAL DIFFUSER / GRILL / EXHAUST FAN TO BE REMOVED.
6. (E) HEADER TO BE REMOVED.

* ALL ITEMS NOT CALLED OUT FOR REMOVAL ON THE DEMOLITION REFLECTED CEILING PLAN ARE TO REMAIN AND TO BE PROTECTED IN PLACE.

NEW FLOOR PLAN KEYNOTES

1. (N) GLUE DOWN CARPET WITH TOP SET RUBBER BASE, PREP FLOOR AS REQUIRED AND FILL ALL VOIDS AND DAMAGED AREAS AS NEEDED TO PROVIDE A UNIFORM AND LEVEL SURFACE. SEE SPECIFICATIONS.
2. (N) FINISH PAINT PER SPECIFICATIONS.
3. (N) WALL MOUNTED T.V. BRACKET, SEE ELECTRICAL PLANS FOR MORE INFO.
4. (N) TACK SURFACE OVER (N) ½" GWB AS NEEDED TO REPLACE DAMAGED PANELS.
5. (N) DRY ERASE WHITE BOARD PER 20/A3.0
6. (N) EXTERIOR ROOM I.D. SIGNAGE PER 8/A3.1
7. (N) EXIT SIGNAGE PER 7/A3.1

NEW REFLECTED CEILING PLAN KEYNOTES

1. (N) 2x4 T-GRID CEILING SYSTEM AND TILES TO MATCH EXISTING PER 1/A4.0
2. (N) 2x4 LIGHT FIXTURE PER 2/A4.0 CONNECT TO EXISTING LIGHT CIRCUIT.
3. (N) MECHANICAL DIFFUSER AND GRILL.
4. (N) CEILING MOUNTED PROJECTOR SYSTEM, SEE ELECTRICAL DRAWINGS.
5. (N) 10" FLEX DUCT TO EXISTING SYSTEM.

DEMO & NEW CEILING PLAN LEGEND

- (E) INTERIOR STUD WALL TO REMAIN, PROTECT IN PLACE.
- (E) CEILING GRID TO REMAIN, PROTECT IN PLACE.
- (E) 2x4 FLUORESCENT LIGHT FIXTURE TO REMAIN, PROTECT IN PLACE.
- (E) MECHANICAL DIFFUSERS & GRILLS TO REMAIN, PROTECT IN PLACE.
- (E) INTERIOR STUD WALL TO BE REMOVED PER DEMO FLOOR PLAN, SEE 7/A2.0.
- (E) 2x4 CEILING GRID TO BE REMOVED.
- (E) GYPSUM BOARD CEILING TO BE REMOVED.
- (E) 2x4 FLUORESCENT LIGHT FIXTURE TO BE REMOVED.
- (E) 1x4 FLUORESCENT LIGHT FIXTURE TO BE REMOVED.
- (E) MECHANICAL DIFFUSERS & GRILLS TO BE REMOVED.
- (E) EXHAUST FAN TO BE REMOVED.
- (E) MECHANICAL DIFFUSERS & GRILLS TO REMAIN, PROTECT IN PLACE.
- (N) 2x4 CEILING GRID PER 1/A4.0
- (N) 2x4 FLUORESCENT LIGHT FIXTURE PER 2/A4.0
- (N) MECHANICAL DIFFUSERS & GRILLS.

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LICENSED ARCHITECT
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CLIENT:

NC STEM Center
Modulars II

Phase B

Interior
Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:
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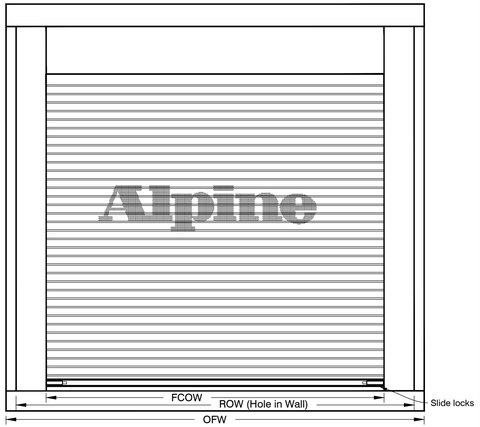
DATE: MAY, 2014

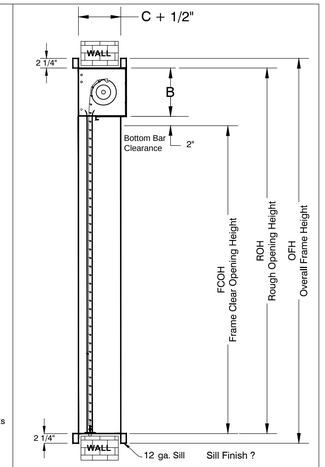
SHEET TITLE:
BUILDING 200 - DEMO & NEW FLOOR & RFL'D CEILING PLANS

SHEET NO:
A2.0

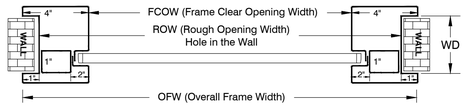
10286 / 03_FP01-02_PHASE IIB



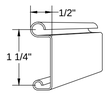
COIL SIDE ELEVATION



VERTICAL SECTION

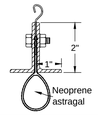


GUIDE SECTION



CURTAIN

DOUBLE ANGLE



BOTTOM BAR

QUANTITY	MARK	FRAME CLEAR OPENING		ROUGH OPENING (Hole in Wall)		OVERALL FRAME		Bracket	Wall Depth	DRIVE	OPERATION
Q	M	F C O WIDTH	F C O HEIGHT	R O WIDTH	R O HEIGHT	O F WIDTH	O F HEIGHT	B	WD	DR	OP
1		3'-0"	3'-6"	3'-4"	4'-6"	3'-6"	4'-10 1/2"	10"	6"	Right	Push Up

STAINLESS STEEL FRAMED ROLL-UP DOOR | NTS | 7

NOT USED

			4

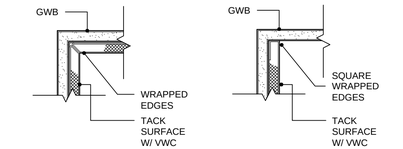
NOT USED

NOT USED

			8

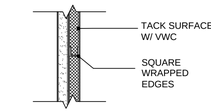
NOT USED

			9

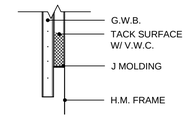


A. PLAN @ CONT. CORNER

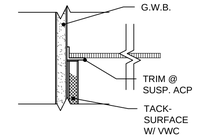
B. PLAN @ ENDING CORNER



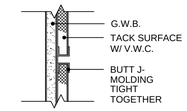
C. PLAN @ JOINT



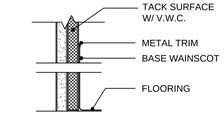
D. PLAN @ DR. HEAD & JAMBS



E. SECTION @ ACP CLG

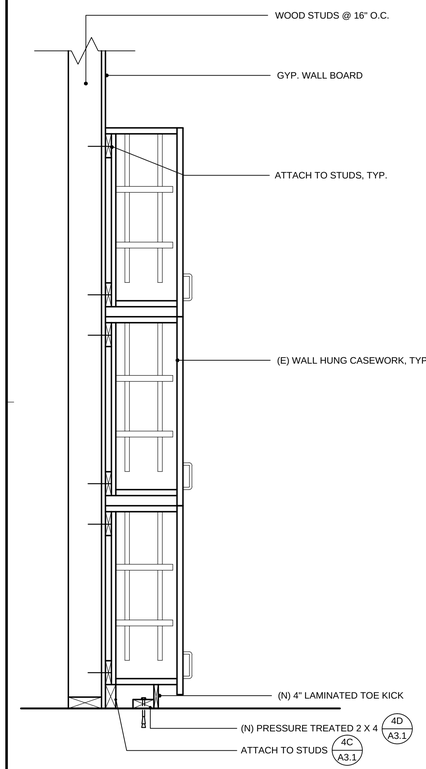


F. SECTION

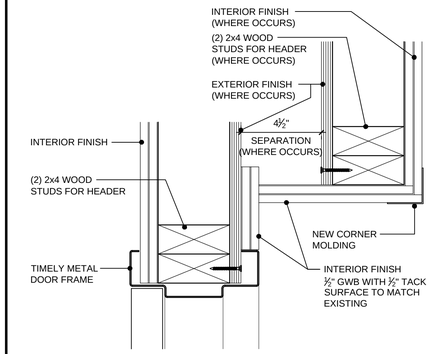


G. SECTION @ FLOOR

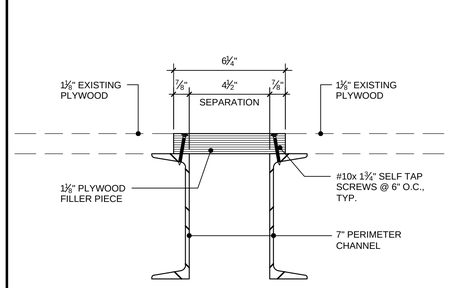
(N) VINYL TACK SURFACE | NTS | 10



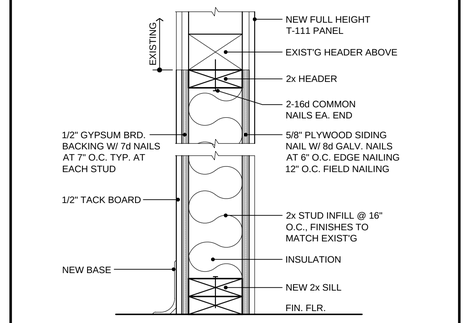
STACKED UPPER CASEWORK | 1" | 16


INTERIOR FINISH (WHERE OCCURS)
(2) 2x4 WOOD STUDS FOR HEADER (WHERE OCCURS)
EXTERIOR FINISH (WHERE OCCURS)
4½"
SEPARATION (WHERE OCCURS)
INTERIOR FINISH
(2) 2x4 WOOD STUDS FOR HEADER
TIMELY METAL DOOR FRAME
NEW CORNER MOLDING
INTERIOR FINISH
½" GWB WITH ½" TACK SURFACE TO MATCH EXISTING

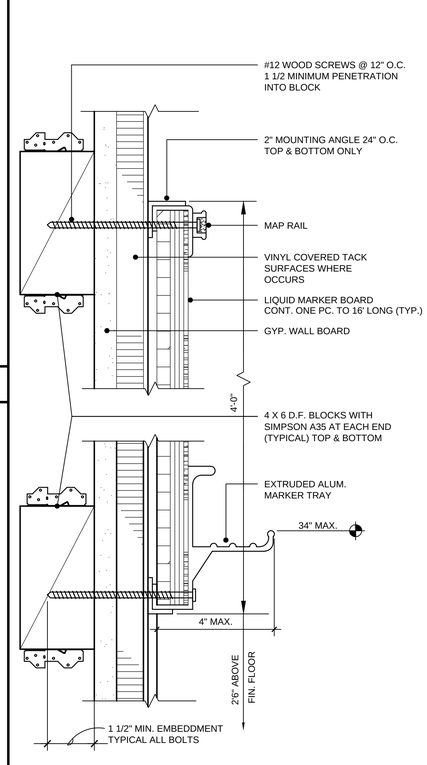
(N) DOOR HEADER | 3" | 12



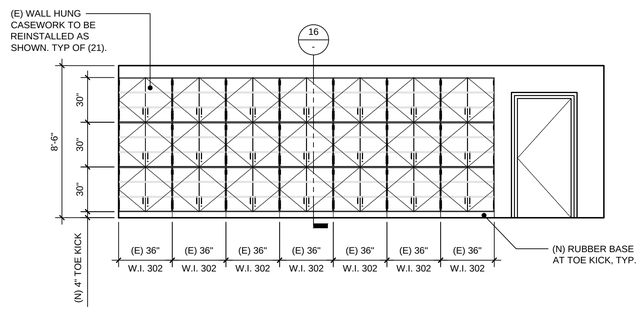
(N) THRESHOLD CLOSURE | 3" | 13


EXISTING
NEW FULL HEIGHT T-111 PANEL
EXIST'G HEADER ABOVE
2x HEADER
2-16d COMMON NAILS EA. END
1/2" GYPSUM BRD. BACKING W/ 7d NAILS AT 7" O.C. TYP. AT EACH STUD
5/8" PLYWOOD SIDING NAIL W/ 8d GALV. NAILS AT 6" O.C. EDGE NAILING 12" O.C. FIELD NAILING
1/2" TACK BOARD
2x STUD INFILL @ 16" O.C., FINISHES TO MATCH EXIST'G
INSULATION
NEW BASE
NEW 2x SILL
FIN. FLR.

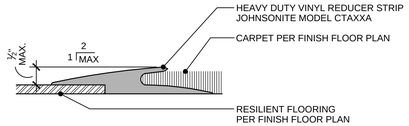
WALL INFILL DETAIL @ DOOR | 1-1/2" | 14


#12 WOOD SCREWS @ 12" O.C.
1 1/2 MINIMUM PENETRATION INTO BLOCK
2" MOUNTING ANGLE 24" O.C. TOP & BOTTOM ONLY
MAP RAIL
VINYL COVERED TACK SURFACES WHERE OCCURS
LIQUID MARKER BOARD CONT. ONE PC. TO 16' LONG (TYP.)
GYP. WALL BOARD
4'-0"
4 X 6 D.F. BLOCKS WITH SIMPSON A35 AT EACH END (TYPICAL) TOP & BOTTOM
EXTRUDED ALUM. MARKER TRAY
34" MAX.
4" MAX.
2'6" ABOVE FIN. FLOOR
1 1/2" MIN. EMBEDDMENT TYPICAL ALL BOLTS

DRY ERASE BOARD | NTS | 20



CASEWORK ELEVATION | 1/4" | 18


½" MAX.
2
1 MAX
HEAVY DUTY VINYL REDUCER STRIP JOHNSONITE MODEL CTAXXA
CARPET PER FINISH FLOOR PLAN
RESILIENT FLOORING PER FINISH FLOOR PLAN

(N) FLOOR TRANSTION | NTS | 19

HCA

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CLIENT:

NC STEM Center
Modulars II

Phase B

Interior
Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:

1 DATE:
2 DATE:
3 DATE:

CHECKED BY: D.W.H DRAWN BY: B.J.H.
DATE: MAY, 2014

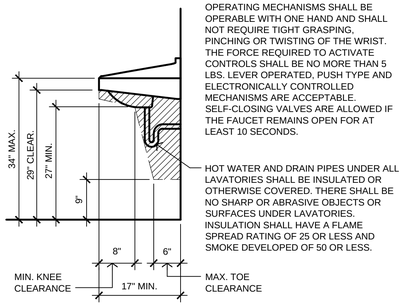
SHEET TITLE:

ARCHITECTURAL DETAILS

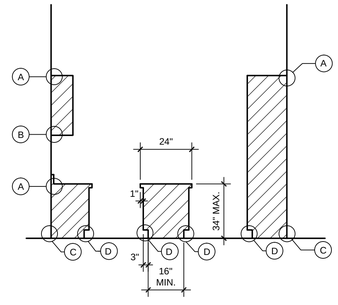
SHEET NO.

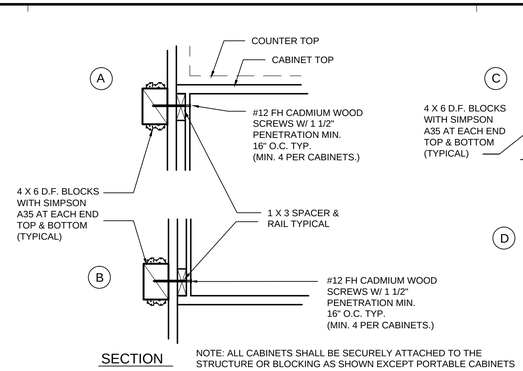
A3.0

10286 / 05_AD01-02_PHASE IIB

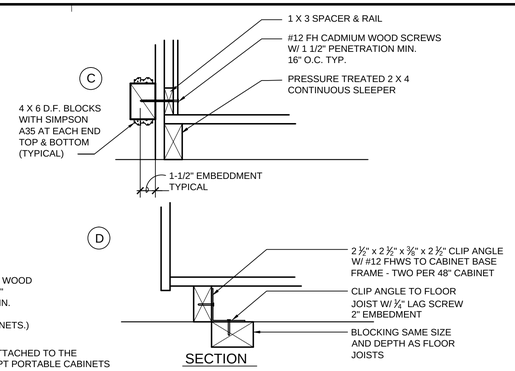

NOTE: FAUCET CONTROLS AND OPERATING MECHANISMS SHALL BE OPERABLE WITH ONE HAND AND SHALL NOT REQUIRE TIGHT GRASPING, PINCHING OR TWISTING OF THE WRIST. THE FORCE REQUIRED TO ACTIVATE CONTROLS SHALL BE NO MORE THAN 5 LBS. LEVER OPERATED, PUSH TYPE AND ELECTRONICALLY CONTROLLED MECHANISMS ARE ACCEPTABLE. SELF-CLOSING VALVES ARE ALLOWED IF THE FAUCET REMAINS OPEN FOR AT LEAST 10 SECONDS.
HOT WATER AND DRAIN PIPES UNDER ALL LAVATORIES SHALL BE INSULATED OR OTHERWISE COVERED. THERE SHALL BE NO SHARP OR ABRASIVE OBJECTS OR SURFACES UNDER LAVATORIES. INSULATION SHALL HAVE A FLAME SPREAD RATING OF 25 OR LESS AND SMOKE DEVELOPED OF 50 OR LESS.
34" MAX.
29" CLEAR.
27" MIN.
9"
8"
6"
17" MIN.
MIN. KNEE CLEARANCE
MAX. TOE CLEARANCE

(N) WALL MOUNTED SINK | NTS | 1



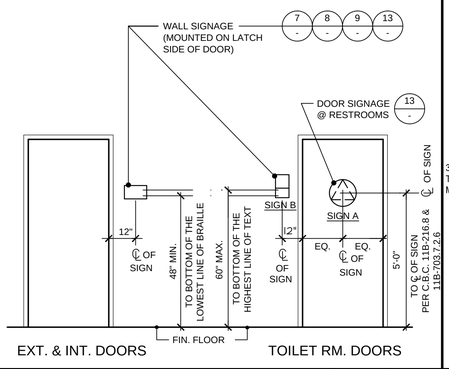

COUNTER TOP
CABINET TOP
#12 FH CADMIUM WOOD SCREWS W/ 1 1/2" PENETRATION MIN. 16" O.C. TYP. (MIN. 4 PER CABINETS.)
4 X 6 D.F. BLOCKS WITH SIMPSON A35 AT EACH END TOP & BOTTOM (TYPICAL)
1 X 3 SPACER & RAIL TYPICAL
#12 FH CADMIUM WOOD SCREWS W/ 1 1/2" PENETRATION MIN. 16" O.C. TYP. (MIN. 4 PER CABINETS.)
SECTION

NOTE: ALL CABINETS SHALL BE SECURELY ATTACHED TO THE STRUCTURE OR BLOCKING AS SHOWN EXCEPT PORTABLE CABINETS

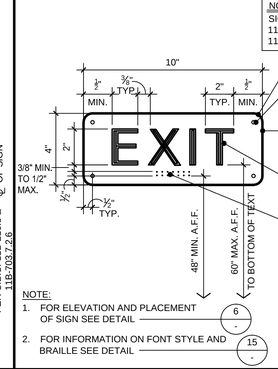

1 X 3 SPACER & RAIL
#12 FH CADMIUM WOOD SCREWS W/ 1 1/2" PENETRATION MIN. 16" O.C. TYP.
PRESSURE TREATED 2 X 4 CONTINUOUS SLEEPER
4 X 6 D.F. BLOCKS WITH SIMPSON A35 AT EACH END TOP & BOTTOM (TYPICAL)
1-1/2" EMBEDDMENT TYPICAL
2 ½" x 2 ½" x ¾" x 2 ½" CLIP ANGLE W/ #12 FHWS TO CABINET BASE FRAME - TWO PER 48" CABINET
CLIP ANGLE TO FLOOR JOIST W/ ¾" LAG SCREW 2" EMBEDMENT
BLOCKING SAME SIZE AND DEPTH AS FLOOR JOISTS
SECTION

CASEWORK ANCHOR DETAIL | NTS | 4

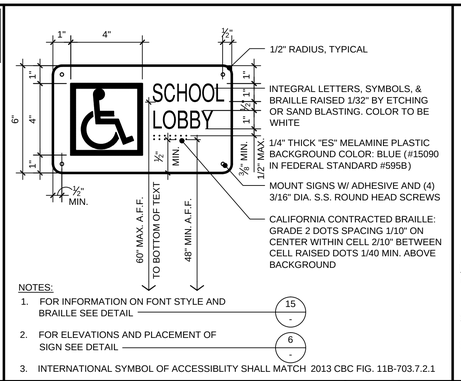
NOT USED | 5



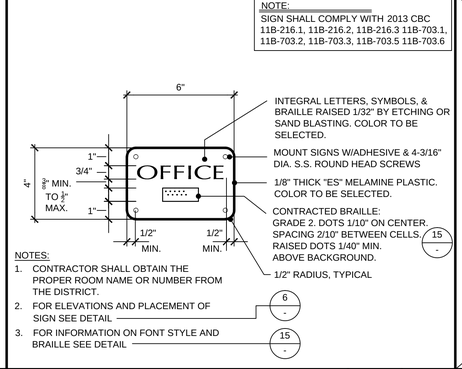
SIGNAGE LOCATION | 3/8" | 6


NOTE:
SIGN SHALL COMPLY WITH 2013 CBC 11B-216.1, 11B-216.2, 11B-216.3 11B-703.1, 11B-703.2, 11B-703.3, 11B-703.5 11B-703.6
10"
3/4" MIN.
3/4" TYP.
2" TYP.
2" MIN.
4"
2"
EXIT
3/8" MIN. TO 1/2" MAX.
1/2" TYP.
1/2" RADIUS, TYPICAL
MOUNT SIGNS W/ ADHESIVE AND (4) 3/16" DIA. S.S. ROUND HEAD SCREWS
1/4" THICK "ES" MELAMINE PLASTIC BACKGROUND COLOR: BLUE (#15090 IN FEDERAL STANDARD #595B)
INTEGRAL LETTERS, SYMBOLS, RAISED 1/32" BY ETCHING OR SAND BLASTING COLOR TO BE WHITE
CALIFORNIA CONTRACTED BRAILLE: GRADE 2 DOTS SPACING 1/10" ON CENTER WITHIN CELL 2/10" BETWEEN CELL RAISED DOTS 1/40 MIN. ABOVE BACKGROUND
48" MIN. A.F.F.
60" MAX. A.F.F.
TO BOTTOM OF TEXT
NOTE:
1. FOR ELEVATION AND PLACEMENT OF SIGN SEE DETAIL 6
2. FOR INFORMATION ON FONT STYLE AND BRAILLE SEE DETAIL 15

EXIT SIGNAGE | 3" | 7

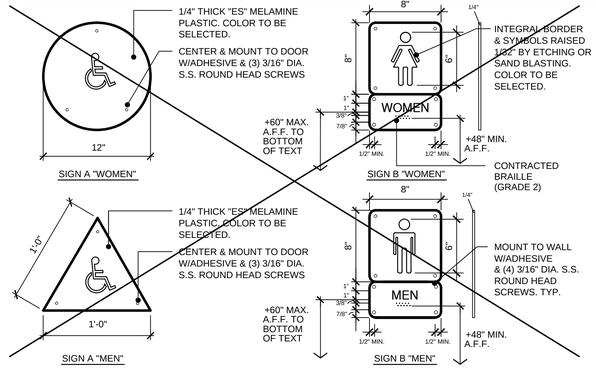

1"
4"
½"
SCHOOL
LOBBY
6"
4"
1"
1"
1"
1"
½" MIN.
1/2" MAX.
½" MIN.
½" MIN.
1/2" RADIUS, TYPICAL
INTEGRAL LETTERS, SYMBOLS, & BRAILLE RAISED 1/32" BY ETCHING OR SAND BLASTING. COLOR TO BE WHITE
1/4" THICK "ES" MELAMINE PLASTIC BACKGROUND COLOR: BLUE (#15090 IN FEDERAL STANDARD #595B)
MOUNT SIGNS W/ ADHESIVE AND (4) 3/16" DIA. S.S. ROUND HEAD SCREWS
CALIFORNIA CONTRACTED BRAILLE: GRADE 2 DOTS SPACING 1/10" ON CENTER WITHIN CELL 2/10" BETWEEN CELL RAISED DOTS 1/40 MIN. ABOVE BACKGROUND
60" MAX. A.F.F. TO BOTTOM OF TEXT
48" MIN. A.F.F.
NOTES:
1. FOR INFORMATION ON FONT STYLE AND BRAILLE SEE DETAIL 15
2. FOR ELEVATIONS AND PLACEMENT OF SIGN SEE DETAIL 6
3. INTERNATIONAL SYMBOL OF ACCESSIBLITY SHALL MATCH 2013 CBC FIG. 11B-703.7.2.1

EXTERIOR ROOM I.D. SIGN | 3" | 8

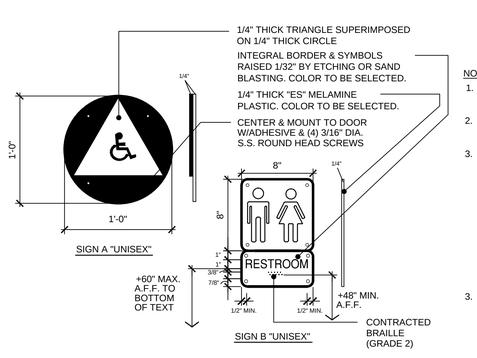

NOTE:
SIGN SHALL COMPLY WITH 2013 CBC 11B-216.1, 11B-216.2, 11B-216.3 11B-703.1, 11B-703.2, 11B-703.3, 11B-703.5 11B-703.6
6"
1"
OFFICE
4"
3/4"
1"
1"
1/2" MIN.
1/2" MIN.
INTEGRAL LETTERS, SYMBOLS, & BRAILLE RAISED 1/32" BY ETCHING OR SAND BLASTING. COLOR TO BE SELECTED.
MOUNT SIGNS W/ADHESIVE & 4-3/16" DIA. S.S. ROUND HEAD SCREWS
1/8" THICK "ES" MELAMINE PLASTIC. COLOR TO BE SELECTED.
CONTRACTED BRAILLE: GRADE 2. DOTS 1/10" ON CENTER. SPACING 2/10" BETWEEN CELLS. RAISED DOTS 1/40" MIN. ABOVE BACKGROUND.
1/2" RADIUS, TYPICAL
NOTES:
1. CONTRACTOR SHALL OBTAIN THE PROPER ROOM NAME OR NUMBER FROM THE DISTRICT.
2. FOR ELEVATIONS AND PLACEMENT OF SIGN SEE DETAIL 6
3. FOR INFORMATION ON FONT STYLE AND BRAILLE SEE DETAIL 15

INTERIOR ROOM I.D. SIGN | 3" | 9

NOT USED | 10


1/4" THICK "ES" MELAMINE PLASTIC. COLOR TO BE SELECTED.
CENTER & MOUNT TO DOOR W/ADHESIVE & (3) 3/16" DIA. S.S. ROUND HEAD SCREWS
12"
SIGN A "WOMEN"
8"
8"
6"
WOMEN
INTEGRAL BORDER & SYMBOLS RAISED 1/32" BY ETCHING OR SAND BLASTING. COLOR TO BE SELECTED.
+60" MAX. A.F.F. TO BOTTOM OF TEXT
+48" MIN. A.F.F.
1/2" MIN.
1/2" MIN.
CONTRACTED BRAILLE (GRADE 2)
SIGN B "WOMEN"
1'-0"
1'-0"
SIGN A "MEN"
MEN
MOUNT TO WALL W/ADHESIVE & (4) 3/16" DIA. S.S. ROUND HEAD SCREWS. TYP.
SIGN B "MEN"

RESTROOM SIGNAGE | 1-1/2" | 13


1/4" THICK TRIANGLE SUPERIMPOSED ON 1/4" THICK CIRCLE
INTEGRAL BORDER & SYMBOLS RAISED 1/32" BY ETCHING OR SAND BLASTING. COLOR TO BE SELECTED.
1/4" THICK "ES" MELAMINE PLASTIC. COLOR TO BE SELECTED.
CENTER & MOUNT TO DOOR W/ADHESIVE & (4) 3/16" DIA. S.S. ROUND HEAD SCREWS
1'-0"
1'-0"
SIGN A "UNISEX"
8"
8"
RESTROOM
+60" MAX. A.F.F. TO BOTTOM OF TEXT
+48" MIN. A.F.F.
1/2" MIN.
1/2" MIN.
CONTRACTED BRAILLE (GRADE 2)
SIGN B "UNISEX"

NOTE:
SIGN SHALL COMPLY WITH 2013 CBC 11B-216.1, 11B-216.2, 11B-216.3 11B-703.1, 11B-703.2, 11B-703.3, 11B-703.5 11B-703.6

NOTES:
1. FOR INFORMATION ON FONT STYLE AND BRAILLE SEE DETAIL 15
2. FOR ELEVATIONS AND PLACEMENT OF SIGN SEE DETAIL 6
3. GEOMETRIC DOOR SIGNS FOR RESTROOMS MUST CONTRAST WITH DOOR (DARK ON LIGHT OR LIGHT ON DARK). FOR UNISEX DOOR SIGNS, TRIANGLE MUST CONTRAST WITH CIRCLE, WHICH MUST CONTRAST WITH DOOR. ENTIRE BACKGROUND COLOR OF GEOMETRIC SYMBOL SIGN MUST CONTRAST WITH DOOR. IT IS NOT ALLOWED TO HAVE A THIN CONTRASTING BORDER AROUND THE SYMBOL WITH REMAINDER OF SIGN BACKGROUND IN A NON-CONTRASTING COLOR. ISA, CONTRASTING WITH BACKGROUND MAY BE ON SIGN. 2013 CBC 11B-216.8, 11B-703.7.2.6 & 11B-703.7.2.1
3. INTERNATIONAL SYMBOL OF ACCESSIBLITY SHALL MATCH 2013 CBC FIG. 11B-703.7.2.1

SIGNAGE NOTES | NTS | 15

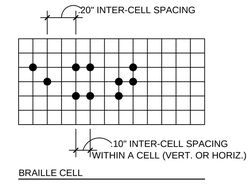
CHARACTER TYPE:
CHARACTERS ON SIGNS SHALL BE RAISED 1/32-INCH (0.794 mm) MINIMUM AND SHALL BE SANS SERIF UPPERCASE CHARACTERS ACCOMPANIED BY GRADE 2 BRAILLE COMPLYING WITH 2013 CBC 11B-703.3 & 11B-703.3.1 DEMONSTRATE CHOSEN TYPE COMPLIES WITH BRAILLE NOTE BELOW.

CHARACTER SIZE:
RAISED CHARACTERS SHALL BE A MINIMUM OF 5/8 INCH (15.9 mm) AND A MAXIMUM OF 2 INCHES (51 mm) HIGH.

FINISH AND CONTRAST:
CONTRAST BETWEEN CHARACTERS, SYMBOLS AND THEIR BACKGROUND MUST BE 70% MINIMUM EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND WITH A NON-GLARE FINISH PER 2013 CBC 11B-703.5.1, 11B-703.6.2 & 11B-703.7.1

PROPORTIONS:
VISUAL CHARATERS ON SIGNS SHALL BE SELECTED FROM FONTS WHERE THE WIDTH OF THE UPPERCASE LETTER "O" IS 60% MINIMUM AND 110% MAXIMUM OF THE HEIGHT OF THE UPPERCASE LETTER "I". STROKE THICKNESS OF THE UPPERCASE LETTER "I" SHALL BE 10% MINIMUM AND 20% MAXIMUM OF THE HEIGHT OF THE CHARACTERS PER 2013 CBC 11B-703.2.4 & 11B-703.2.6.

BRAILLE:
CALIFORNIA "CONTRACTED GRADE 2 BRAILLE" SHALL BE USED WHEREVER BRAILLE IS SHOWN. DOTS SHALL BE 1/10 INCH (2.54 mm) ON CENTERS IN EACH CELL WITH 2/10 INCH (5.08 mm) SPACE BETWEEN CELLS, MEASURED FROM THE SECOND COLUMN OF DOTS IN THE FIRST CELL TO THE FIRST COLUMN OF DOTS IN THE SECOND CELL. DOTS SHALL BE RAISED A MINIMUM OF 1/40 INCH (0.635 mm) ABOVE THE BACKGROUND. 2013 CBC 11B-703.3 & 11B-703.3.1. WITH ROUNDED DOME DOTS. REQUIRED ROUNDED OR DOMED CALIFORNIA BRAILLE DOTS, EACH DISTINCT AND SEPARATE. DOTS WITH STRAIGHT SIDES AND FLAT TOPS ARE NOT ALLOWED.



RESTROOM SIGNAGE | 1-1/2" | 13

SIGNAGE NOTES | NTS | 15

NOT USED | 16

NOT USED | 17

NOT USED | 18

NOT USED | 19

NOT USED | 20

HCA

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REN 10-31-15
STATE OF CALIFORNIA

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CONSULTANT:

CLIENT:

NC STEM Center Modulars II

Phase B

Interior Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

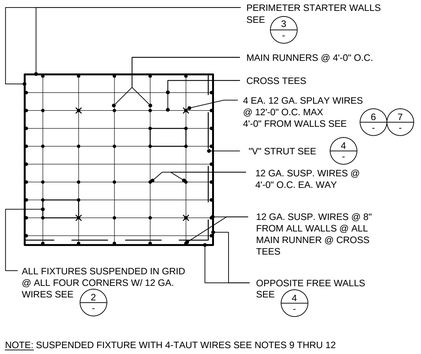
REVISIONS:
1 DATE:
2 DATE:
3 DATE:

CHECKED BY: D.W.H DRAWN BY: B.J.H.
DATE: MAY, 2014

SHEET TITLE:
ARCHITECTURAL DETAILS

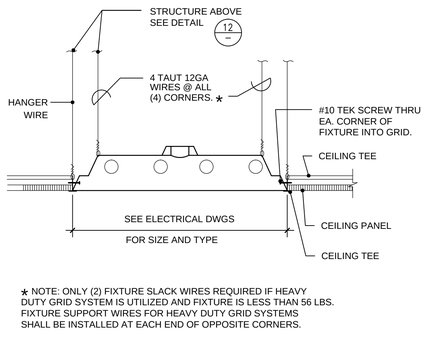
SHEET NO:
A3.1

10286 / 05_ADD1-02_PHASE IIB



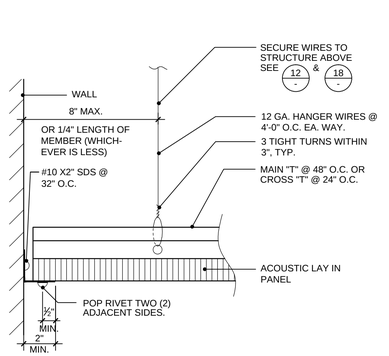
NOTE: SUSPENDED FIXTURE WITH 4-TAUT WIRES SEE NOTES 9 THRU 12

T-GRID LAYOUT | 1/8" | 1

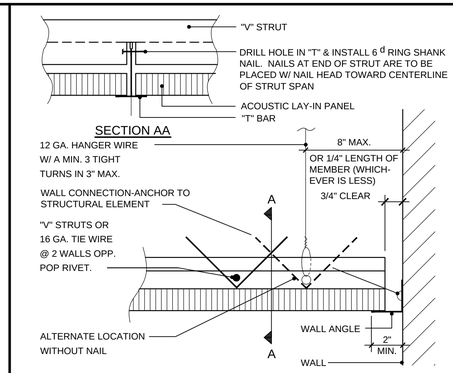


* NOTE: ONLY (2) FIXTURE SLACK WIRES REQUIRED IF HEAVY DUTY GRID SYSTEM IS UTILIZED AND FIXTURE IS LESS THAN 56 LBS. FIXTURE SUPPORT WIRES FOR HEAVY DUTY GRID SYSTEMS SHALL BE INSTALLED AT EACH END OF OPPOSITE CORNERS.

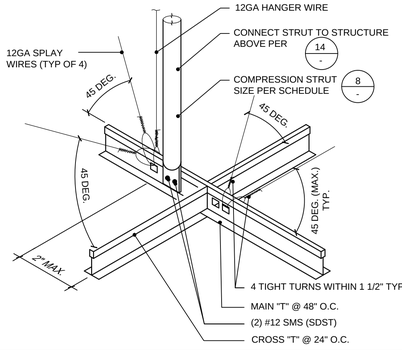
LIGHTING FIXTURE | NTS | 2



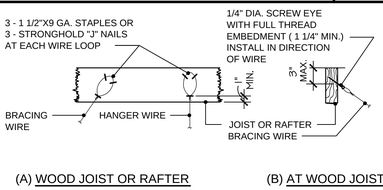
WALL ANGLE | HALF | 3



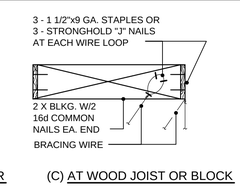
WALL ANGLE | HALF | 4



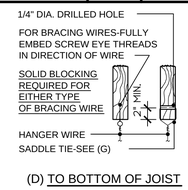
STRUT/ WIRES TO GRID | 3" | 6



(A) WOOD JOIST OR RAFTER

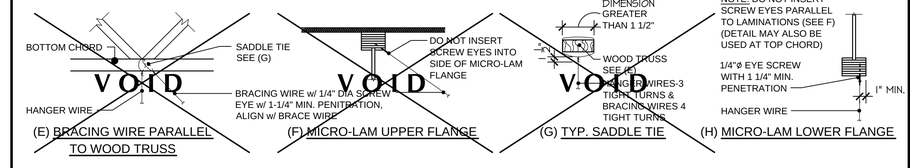


(B) AT WOOD JOIST OR RAFTER



(C) AT WOOD JOIST OR BLOCK

(D) TO BOTTOM OF JOIST



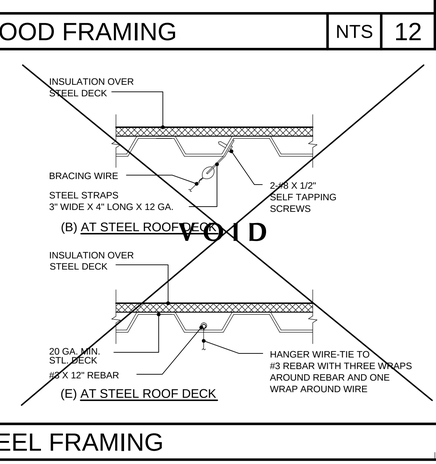
(E) BRACING WIRE PARALLEL TO WOOD TRUSS

(F) MICRO-LAM UPPER FLANGE

(G) TYP. SADDLE TIE

(H) MICRO-LAM LOWER FLANGE

HANGER WIRE CONNECTIONS TO WOOD FRAMING | NTS | 12



STRUT/ WIRES TO GRID | 3" | 7

ELECTRICAL METALLIC TUBING (EMT)

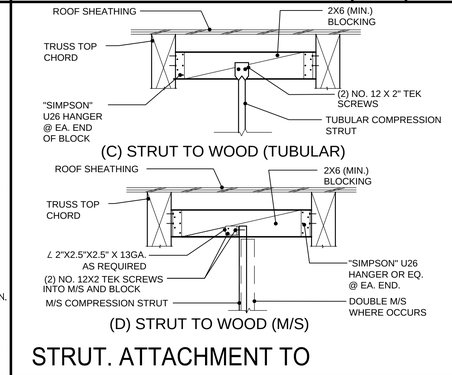
SIZE	I.D.	O.D.	r	MAX LENGTH
1/2	.622	.706	.23	46"
3/4	.824	.922	.31	62"
1	1.049	1.163	.39	78"
1-1/4	1.380	1.510	.51	102"
1-1/2	1.610	1.740	.59	118"
2	2.067	2.197	.75	150"

METAL STUD - (25 GA. SS SERIES BY GEMCO OR EQUAL)

SIZE	A	I	r	MAX LENGTH
1625S25	.071	.014	.44	88"
DBL'D 1625S25	.017	.035	.70	140"
DBL'D 2505S25	.076	.043	1.09	218"

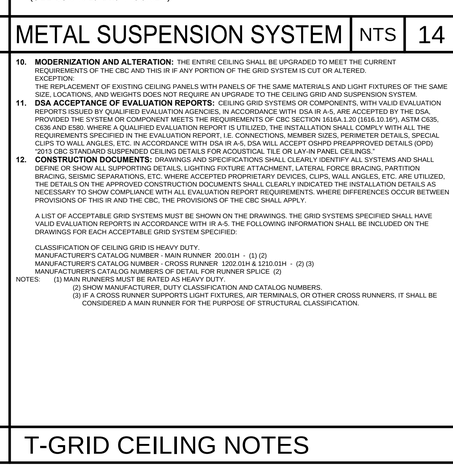
NO. 6 TEKS SCREW @ 18" O.C.

STRUT SIZE SCHEDULE | NTS | 8



STRUT. ATTACHMENT TO ROOF STRUCTURE ABOVE | NTS | 14

ACCEPTABLE LOCATION OF EXPANSION JOINTS IN EXITWAYS



Ⓐ EXPANSION JOINT AT INERSECTIONS OF CORRIDORS, JUNCTIONS OF CORRIDORS AND LOBBIES, SIMILAR AREAS AND CEILING AREAS OVER 2500 SQ.FT.

Ⓑ ACCEPTABLE EXITWAYS DETAILS

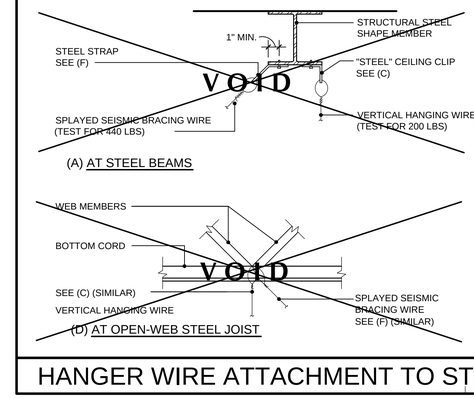
(SEE DSA IR 25-2.13 FIGURE 7)

METAL SUSPENSION SYSTEM | NTS | 14

CONNECTED WALL FOR ESSENTIAL SERVICES BUILDINGS. FOR SCHOOLS SEE FIG. 2 (B)

WALL SLIP

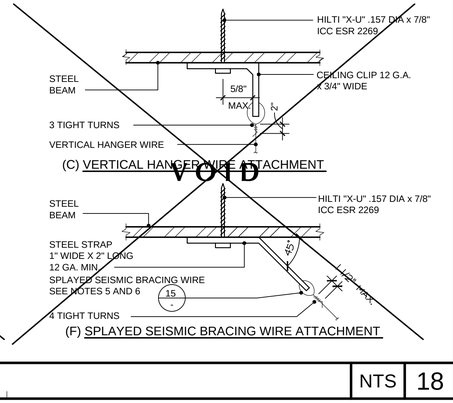
HANGER WIRE ATTACHMENT TO STEEL FRAMING | NTS | 18



(A) AT STEEL BEAMS

(B) AT STEEL ROOF DECK

(E) AT STEEL ROOF DECK



(C) VERTICAL HANGER WIRE ATTACHMENT

(F) SPLAYED SEISMIC BRACING WIRE ATTACHMENT

T-GRID CEILING NOTES | NTS | 20

(D) AT OPEN-WEB STEEL JOIST

FOR HEAVY DUTY SUSPENDED CEILING SYSTEMS IR-25.2.13

1. **GENERAL REQUIREMENTS:** CBC SECTION 1616A.1.20 (1616.10.1#) REQUIRES THE DESIGN AND INSTALLATION TO BE IN COMPLIANCE WITH ASTM C635, C636, AND E580, SECTION 5, AS AMENDED BY 2013 CBC SECTION 1616A.1.20 (1616.10.1#). NOTE: AMENDMENTS IN CBC SECTION 1616A.1.20 (1616.10.1#) REPLACE ASCE 7, SECTION 13.5.6. THE REQUIREMENTS IN THIS IR APPLY TO FLAT AND LEVEL CEILING SYSTEMS WHOSE TOTAL WEIGHT, INCLUDING CEILING MOUNTED AIR TERMINALS, SERVICES AND LIGHT FIXTURES, DOES NOT EXCEED FOUR (4) PSF. HEAVIER SYSTEMS, SYSTEMS THAT ARE NOT FLAT AND LEVEL, AND THOSE SUPPORTING LATERAL LOADS FROM PARTITIONS ARE BEYOND THE SCOPE OF THIS IR AND WILL REQUIRE SPECIAL DESIGN AND DETAILS.

2. **SUSPENSION SYSTEM COMPONENTS:** SHALL COMPLY WITH ASTM C635 AND SECTION 5.1 OF ASTM E580.
2.1 THE CEILING GRID SYSTEM MUST BE RATED HEAVY DUTY AS DEFINED BY ASTM C635.
2.2 CEILING WIRE SHALL BE CLASS 1 ZINC COATED (GALVANIZED) CARBON STEEL WIRE, CONFORMING TO ASTM A641. WIRE SHALL BE #12 GAGE (0.106" DIAMETER) WITH SOFT TEMPER AND MINIMUM TENSILE STRENGTH = 70 KSI.
2.3 MAIN RUNNERS, CROSS RUNNERS, SPLICES, EXPANSION DEVICES, AND INTERSECTION CONNECTORS SHALL BE DESIGNED TO CARRY A MEAN ULTIMATE TEST LOAD OF NOT LESS THAN 180 LBS. IN COMPRESSION AND TENSION PER ASTM E580 SECTION 5.1.2.

3. **SUSPENSION SYSTEM INSTALLATION:** SHALL COMPLY WITH ASTM C636 AND SECTION 5.2 OF ASTM E580.
3.1 #12 GAGE HANGER WIRES MAY BE USED FOR UP TO AND INCLUDING A 4 FOOT BY 4 FOOT GRID SPACING AND SHALL BE ATTACHED TO MAIN RUNNERS.
3.2 PROVIDE #12 GAGE HANGER WIRES AT THE ENDS OF ALL MAIN AND CROSS RUNNERS WITHIN EIGHT (8) INCHES OF THE SUPPORT OR WITHIN ONE-FOURTH (1/4) OF THE LENGTH OF THE END TEE, WHICHEVER IS LEAST, FOR THE PERIMETER OF THE CEILING AREA (SEE DETAIL 36A/- AND IR 25-2.13 FIGURE 2). PERIMETER WIRES ARE NOT REQUIRED WHEN THE LENGTH OF THE END TEE IS EIGHT (8) INCHES OR LESS.
3.3 CEILING GRID MEMBERS SHALL BE ATTACHED TO TWO (2) ADJACENT WALLS PER ASTM E580, SECTION 5.2.3. CEILING GRID MEMBERS SHALL BE AT LEAST 3/4 INCH CLEAR OF OTHER WALLS. IF WALLS ARE DIAGONALLY TO CEILING GRID SYSTEM RUNNERS, ONE END OF MAIN AND CROSS RUNNERS SHOULD BE FREE, AND A MINIMUM OF 3/4 INCH CLEAR OF WALL.
3.4 THE WIDTH OF THE PERIMETER SUPPORTING CLOSURE ANGLE SHALL BE NOT LESS THAN TWO INCHES. GRID SYSTEMS WITH SPECIALTY OR PROPRIETARY ANGLES AND SUPPORT CLIPS MAY BE ACCEPTABLE IN ACCORDANCE WITH SECTION 11 BELOW.
3.5 AT THE PERIMETER OF THE CEILING AREA, WHERE MAIN OR CROSS RUNNERS ARE NOT CONNECTED TO THE ADJACENT WALL, PROVIDE INTERCONNECTION BETWEEN THE RUNNERS AT THE FREE END TO PREVENT LATERAL SPREADING. A METAL SPREADER STRUT OR A #16 GAGE WIRE WITH A POSITIVE MECHANICAL CONNECTION TO THE RUNNER MAY BE USED AND PLACED WITHIN EIGHT (8) INCHES OF THE WALL WHERE THE PERPENDICULAR DISTANCE FROM THE WALL TO THE FIRST PARALLEL RUNNER IS EIGHT (8) INCHES OR LESS, THIS INTERLOCK IS NOT REQUIRED.

4. **EXPANSION JOINTS, SEISMIC SEPARATION JOINTS, AND PENETRATIONS:**
4.1 EXPANSION JOINTS SHALL BE PROVIDED IN THE CEILING AT INTERSECTIONS OF CORRIDORS AND AT JUNCTIONS OF CORRIDORS AND LOBBIES OR OTHER SIMILAR AREAS (SEE DETAIL 14/- 'A', AND IR 25-2.13 FIGURE 7, DETAIL A).
4.2 FOR CEILING AREAS EXCEEDING 2,500 SQUARE FEET, A SEISMIC SEPARATION JOINT SHALL BE PROVIDED IN ACCORDANCE WITH (SEE DETAIL 14/- 'A', AND IR 25-2.13 FIGURE 7, DETAIL A) TO DIVIDE THE CEILING INTO AREAS NOT EXCEEDING 2,500 SQUARE FEET, ALTERNATIVELY, COMPLY WITH ASTM E580, SECTION 5.2.9.
4.3 PENETRATIONS THROUGH THE CEILING FOR SPRINKLER HEADS AND OTHER SIMILAR DEVICES THAT ARE NOT INTEGRALLY TIED TO THE CEILING SYSTEM IN THE LATERAL DIRECTION SHALL HAVE A TWO (2) INCH OVERSIZED RING, SLEEVE OR ADAPTER THROUGH THE CEILING TILE TO ALLOW FREE MOVEMENT OF ONE (1) INCH IN ALL HORIZONTAL DIRECTIONS. ALTERNATIVELY, PER ASTM E580, SECTION 5.2.8.5, A FLEXIBLE SPRINKLER HOSE FITTING THAT CAN ACCOMMODATE ONE (1) INCH OF CEILING MOVEMENT SHALL BE PERMITTED TO BE USED IN LIEU OF THE OVERSIZED RING, SLEEVE, OR ADAPTER.

5. **LATERAL FORCE BRACING:** LATERAL FORCE BRACING IS REQUIRED PER THIS SECTION FOR ALL CEILING AREAS. THE SPACING OF THE BRACING ASSEMBLIES MUST BE SHOWN ON THE CONSTRUCTION DOCUMENTS.

EXCEPTION: LATERAL FORCE BRACING MAY BE OMITTED FOR SUSPENDED ACOUSTICAL CEILING SYSTEMS WITH A CEILING AREA OF 144 SQUARE FEET OR LESS, WHEN PERIMETER SUPPORT, IN ACCORDANCE WITH SECTION 3.3 OF THIS IR OR WITH ASTM E580 SECTIONS 5.2.2 AND 5.2.3, ARE PROVIDED AND PERIMETER WALLS ARE DESIGNED TO CARRY THE CEILING LATERAL FORCES.
5.1 PROVIDE LATERAL FORCE BRACING ASSEMBLIES CONSISTING OF A COMPRESSION STRUT AND FOUR (4) #12 GAGE SPLAYED BRACING WIRES DIRECTED 90 DEGREES FROM EACH OTHER (SEE DETAIL 6A7/- AND IR 25-2.13 FIGURE 1).
5.2 LATERAL FORCE BRACING ASSEMBLIES SHALL BE SPACED PER TABLE 1 FOR ALL VALUES OF THE COMPONENT IMPORTANCE FACTOR (I_p) OF THE CEILING.

TABLE 1
LATERAL FORCE BRACE ASSEMBLY SPACING

DESIGN SPECTRAL ACCELERATION PARAMETER S_{DS}	BRACE ASSEMBLY SPACING
LESS THAN OR EQUAL TO 1.15	12'x12' FULL BUILDING HEIGHT
GREATER THAN 1.15 AND LESS THAN OR EQUAL TO 1.73	8'x12' FOR z/h GREATER THAN 0.5 12'X12' FOR z/h LESS THAN OR EQUAL TO 0.5
GREATER THAN 1.73	8'X8' FOR Z/H GREATER THAN 0.5 8'x12' FOR Z/H LESS THAN OR EQUAL TO 0.5

WHERE, AS DEFINED IN ASCE 7-10, SECTION 13.3.1:
Z = HEIGHT IN STRUCTURE OF POINT OF ATTACHMENT OF CEILING WITH RESPECT TO THE BASE.
H = AVERAGE ROOF HEIGHT OF THE STRUCTURE WITH RESPECT TO THE BASE.

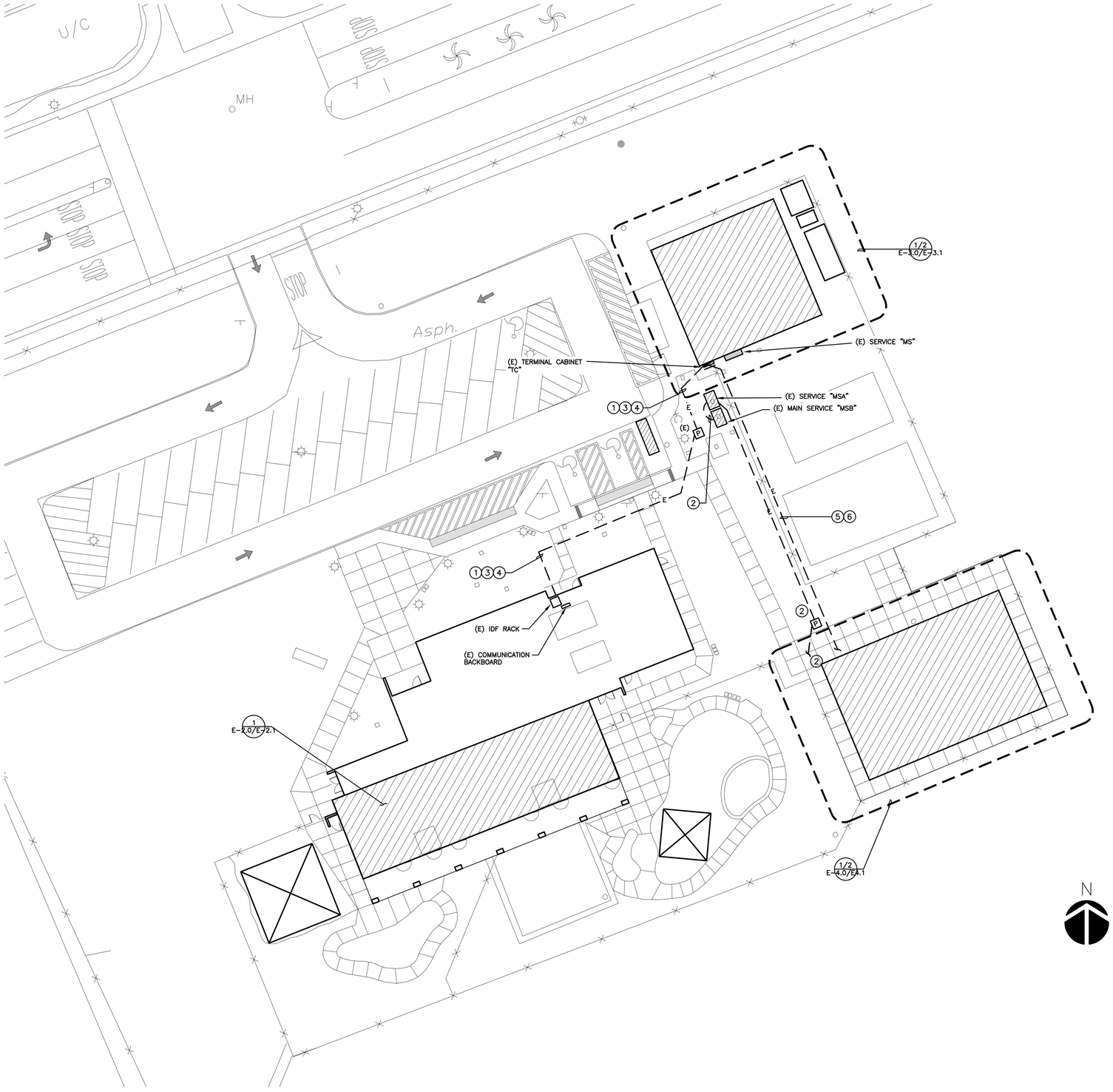
WHERE DIFFERENT BRACE SPACING IS SPECIFIED AT VARIOUS STORIES, THE RESPECTIVE CEILING PLAN SHALL CLEARLY INDICATE THE BRACE SPACING. THERE SHALL BE A BRACE ASSEMBLY A DISTANCE OF NOT MORE THAN ONE HALF OF THE ABOVE SPACING FROM EACH SURROUNDING WALL, EXPANSION JOINT AND AT THE EDGES OF ANY CEILING VERTICAL OFFSET. FOR EXAMPLE, WHERE THE BRACE SPACING IS 8'X12', THE DISTANCE SHALL BE 4 FEET IN THE DIRECTION OF THE 8 FOOT SPACING AND 6 FEET IN THE DIRECTION OF THE 12 FOOT SPACING.
5.3 THE SLOPE OF BRACING WIRES SHALL NOT EXCEED 45 DEGREES FROM THE PLANE OF THE CEILING AND WIRES SHALL BE TAUT. SPLICES IN WIRES ARE NOT PERMITTED WITHOUT DSA APPROVAL.
5.4 COMPRESSION STRUTS SHALL BE ADEQUATE TO RESIST THE VERTICAL COMPONENT INDUCED BY THE BRACING WIRES, AND SHALL NOT BE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB.

6. **ATTACHMENT OF HANGER AND BRACING WIRES:**
6.1 FASTEN HANGER WIRES WITH NOT LESS THAN THREE (3) TIGHT TURNS IN THREE (3) INCHES. HANGER WIRE LOOPS SHALL BE TIGHTLY WRAPPED AND SHARPLY BENT TO PREVENT ANY VERTICAL MOVEMENT OR ROTATION OF THE MEMBER WITHIN THE LOOPS (SEE ASTM E580, SECTION 5.2.7.2).
6.2 FASTEN BRACING WIRES WITH FOUR (4) TIGHT TURNS. MAKE ALL TIGHT TURNS WITHIN A DISTANCE OF ONE AND ONE-HALF (1-1/2) INCHES.
6.3 HANGER OR BRACING WIRE ANCHORED TO THE STRUCTURE SHOULD BE INSTALLED IN SUCH A MANNER THAT THE DIRECTION OF THE ANCHOR ALIGNS AS CLOSELY AS POSSIBLE WITH THE DIRECTION OF THE WIRE.
6.4 SEPARATE ALL CEILING HANGER AND BRACING WIRES AT LEAST SIX (6) INCHES FROM ALL UNBRACED DUCTS, PIPES, CONDUIT, ETC.
6.5 HANGER WIRES SHALL NOT ATTACH TO OR BEND AROUND INTERFERING MATERIAL OR EQUIPMENT. PROVIDE TRAPEZE OR OTHER SUPPLEMENTARY SUPPORT MEMBERS AT OBSTRUCTIONS TO TYPICAL HANGER SPACING (SEE DETAIL 12/- 'G', AND IR 25-2.13 FIGURE 3A, DETAIL F). PROVIDE ADDITIONAL HANGERS, STRUTS OR BRACES AS REQUIRED AT ALL CEILING BREAKS, SOFFITS, OR DISCONTINUOUS AREAS.
6.6 HANGER WIRES THAT ARE MORE THAN ONE (HORIZONTAL) IN SIX (VERTICAL) OUT OF PLUMB SHALL HAVE COUNTER-SLOPING WIRES. PERIMETER HANGER WIRES AT MAIN RUNNERS THAT ARE POSITIVELY ATTACHED TO THE PERIMETER CLOSURE ANGLE, COUNTER-SLOPING IS OPTIONAL.
NOTE: SEE ASTM C636, (SEE DETAIL 6A7/- AND IR 25-2.13 FIGURE 1), FOR COUNTER-SLOPING METHODS.
6.7 WHEN CONNECTION DETAILS DIFFER FROM THOSE IN THE ATTACHED FIGURES, ATTACHMENT OF BRACING WIRES TO THE STRUCTURE ABOVE AND TO THE MAIN RUNNERS SHALL BE ADEQUATE FOR THE LOAD IMPOSED. THE WEIGHT (W_p) SHALL BE TAKEN AS NOT LESS THAN FOUR (4) PSF FOR CALCULATING SEISMIC FORCES (F_p).
6.8 WHEN DRILLED-IN CONCRETE ANCHORS OR POWER ACTUATED FASTENERS ARE USED IN REINFORCED CONCRETE FOR HANGER WIRES, 1 OUT OF 10 WIRE/ANCHOR ASSEMBLIES MUST BE FIELD TESTED FOR 200 LBS. IN TENSION. WHEN DRILLED-IN CONCRETE ANCHORS ARE USED FOR BRACING WIRES, 1 OUT OF 2 WIRE/ANCHOR ASSEMBLIES MUST BE FIELD TESTED FOR 440 LBS. IN TENSION IN THE DIRECTION OF THE WIRE. POWER ACTUATED FASTENERS IN CONCRETE ARE NOT PERMITTED FOR BRACING WIRES.
NOTE: DRILLED-IN ANCHORS OR POWER ACTUATED FASTENERS REQUIRE DSA APPROVAL PRIOR TO USE IN PRESTRESSED CONCRETE.

7. **CEILING FIXTURES, TERMINALS, AND DEVICES:** ALL FIXTURES, TERMINALS, AND OTHER DEVICES SHALL BE MOUNTED IN A MANNER THAT WILL NOT COMPROMISE CEILING PERFORMANCE IN ACCORDANCE WITH SECTION 13.5.6.2.2(5) OF ASCE 7-10 AS AMENDED BY 2013 CBC SECTION 1616A.1.20 (1616.10.1#) AND ASTM E580 SECTIONS 5.3 AND 5.4.
7.1 CEILING PANELS SHALL NOT SUPPORT ANY LIGHT FIXTURES, AIR TERMINALS OR DEVICES.
7.2 LIGHT FIXTURES:
7.2.1 ALL LIGHT FIXTURES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE FIXTURE. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH LIGHT FIXTURE, PER ASTM E580, SECTION 5.3.1.
7.2.2 LIGHT FIXTURES WEIGHING LESS THAN OR EQUAL TO 10 LB. SHALL HAVE A MINIMUM OF ONE (1) #12 GAGE SLACK SAFETY WIRE CONNECTED FROM THE FIXTURE HOUSING TO THE STRUCTURE ABOVE.
7.2.3 LIGHT FIXTURES WEIGHING GREATER THAN 10 LB. BUT LESS THAN OR EQUAL TO 56 LBS. MAY BE SUPPORTED DIRECTLY ON THE CEILING RUNNERS, BUT THEY SHALL HAVE A MINIMUM OF TWO (2) #12 GAGE SLACK SAFETY WIRES CONNECTED FROM THE FIXTURE HOUSING AT DIAGONAL CORNERS AND ANCHORED TO THE STRUCTURE ABOVE.
7.2.4 LIGHT FIXTURES WEIGHING GREATER THAN 56 LB. SHALL BE INDEPENDENTLY SUPPORTED BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES ATTACHED TO THE HOUSING AND TO THE STRUCTURE ABOVE. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.
7.2.5 ALL FOUR FOOT X FOUR FOOT LIGHT FIXTURES MUST HAVE SLACK SAFETY WIRES AT EACH CORNER UNLESS SUPPORTED PER SECTION 7.2.4.
7.2.6 SURFACE-MOUNTED FIXTURES SHALL BE ATTACHED TO THE MAIN RUNNER WITH AT LEAST TWO POSITIVE CLAMPING DEVICES MADE OF MATERIAL WITH A MINIMUM #14 GAGE. ROTATIONAL SPRING CATCHES DO NOT COMPLY. A #12 GAGE SUSPENSION WIRE SHALL BE ATTACHED TO EACH CLAMPING DEVICE TO THE STRUCTURE ABOVE. PROVIDE ADDITIONAL SUPPORTS WHEN LIGHT FIXTURES ARE EIGHT (8) FEET OR LONGER. MAXIMUM SPACING BETWEEN SUPPORTS SHALL NOT EXCEED EIGHT (8) FEET.
7.2.7 SUPPORT PENDANT-MOUNTED LIGHT FIXTURES DIRECTLY FROM THE STRUCTURE ABOVE WITH HANGER WIRES OR CABLES PASSING THROUGH EACH PENDANT HANGER AND CAPABLE OF SUPPORTING TWO (2) TIMES THE WEIGHT OF THE FIXTURE. SEE IR 16-9 FOR ADDITIONAL REQUIREMENTS FOR PENDANT-MOUNTED FIXTURES. IF THE PENDANT MOUNTED LIGHT FIXTURE IS DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING, I.E., AIRCRAFT CABLES TO WALLS, THEN A BRACE ASSEMBLY IS NOT REQUIRED ABOVE THE CEILING. IF THE PENDANT MOUNTED LIGHT FIXTURE IS NOT DIRECTLY AND INDEPENDENTLY BRACED BELOW THE CEILING, THEN A BRACING ASSEMBLY, PER FIGURE 1, IS REQUIRED WHERE THE PENDANT HANGER PENETRATES THE CEILING. SPECIAL DETAILS ARE REQUIRED TO ATTACH THE PENDANT HANGER TO THE BRACING ASSEMBLY TO TRANSMIT THE HORIZONTAL FORCE. EXCEPTION: WHERE THE WEIGHT OF THE FIXTURE IS LESS THAN 20 POUNDS, THE COMPRESSION POST SHOWN IN (SEE DETAIL 6&7/- AND IR 25-2.13 FIGURE 1) IS NOT REQUIRED.
7.2.8 RIGID CONDUIT SHALL NOT BE USED FOR ATTACHMENT OF THE FIXTURES.
7.3 SERVICES WITHIN THE CEILING:
7.3.1 ALL FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES SHALL BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION SYSTEMS BY MECHANICAL MEANS TO RESIST A HORIZONTAL FORCE EQUAL TO THE WEIGHT OF THE COMPONENT. SCREWS OR APPROVED FASTENERS ARE REQUIRED. A MINIMUM OF TWO ATTACHMENTS ARE REQUIRED AT EACH COMPONENT.
7.3.2 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING LESS THAN OR EQUAL TO 20 LB. SHALL HAVE ONE (1) #12 GAGE SLACK SAFETY WIRE ATTACHED TO THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.3.3 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 20 LB. BUT LESS THAN OR EQUAL TO 56 LB. SHALL HAVE TWO (2) #12 GAGE SLACK SAFETY WIRES ATTACHED TO THE TERMINAL OR SERVICE TO THE STRUCTURE ABOVE.
7.3.4 FLEXIBLE SPRINKLER HOSE FITTINGS, CEILING-MOUNTED AIR TERMINALS OR OTHER SERVICES WEIGHING MORE THAN 56 LB. SHALL BE SUPPORTED DIRECTLY FROM THE STRUCTURE ABOVE BY NOT LESS THAN FOUR (4) TAUT #12 GAGE WIRES ATTACHED TO THE TERMINAL OR SERVICE AND TO THE STRUCTURE ABOVE. THE FOUR (4) TAUT #12 GAGE WIRES, INCLUDING THEIR ATTACHMENT TO THE STRUCTURE ABOVE, MUST BE CAPABLE OF SUPPORTING FOUR (4) TIMES THE WEIGHT OF THE UNIT.

8. **ADDITIONAL REQUIREMENTS:**
8.1 FIRE RATED CEILINGS: PROVIDE A DETAIL AND DESIGN NUMBER FOR RATED CEILING ASSEMBLIES FROM AN AUTHORIZED TESTING AGENCY. THE COMPONENTS AND INSTALLATION DETAILS MUST CONFORM IN EVERY RESPECT WITH THE LISTED DETAIL AND NUMBER. DETAILS SHALL CLEARLY DEPICT ALL COMPONENTS, INCLUDING INSULATING MATERIALS, FRAMING AND ATTACHMENT OF THE DESIGN SO THAT THE ASSEMBLY CAN BE CONSTRUCTED AND INSPECTED ACCORDINGLY. POP RIVETS, SCREWS, OR OTHER ATTACHMENTS ARE NOT ACCEPTABLE UNLESS SPECIFICALLY DETAILED ON THE DRAWINGS AND APPROVED BY U.L. AND STATE FIRE MARSHAL (SFM) RECOGNIZED LABORATORIES.
8.2 METAL AND OTHER PANELS: METAL PANELS AND PANELS WEIGHING MORE THAN ONE-HALF (1/2) PSF, OTHER THAN MINERAL FIBER ACOUSTICAL TILE, ARE TO BE POSITIVELY ATTACHED TO THE CEILING SUSPENSION RUNNERS.
8.3 ESSENTIAL SERVICES BUILDINGS: EXITWAYS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 13.5.6.2.2(1) OF ASCE 7-10 AS AMENDED BY 2013 CBC SECTION 1616A.1.20 (1616.10.1#). A MAIN OR CROSS RUNNER SHALL BE INSTALLED ON ALL SIDES OF EACH PIECE OF TILE, BOARD OR PANEL AND EACH LIGHT FIXTURE OR GRILL (SEE DETAIL 14/- 'B' AND IR 25-2.13 FIGURE 7, DETAIL B). SPLICES OR INTERSECTION OF SUCH RUNNERS SHALL BE ATTACHED WITH THROUGH CONNECTORS SUCH AS POP RIVETS, SCREWS, PINS, PLATES WITH END TABS OR OTHER APPROVED CONNECTORS.
8.4 SUSPENDED ACOUSTICAL CEILINGS BELOW GYPSUM BOARD CEILINGS: WHERE GYPSUM BOARD OR OTHER CEILING FINISHES ARE ATTACHED TO THE FRAMING, SPECIFIC DETAILS WILL BE REQUIRED FOR THE VERTICAL HANGER WIRE AND LATERAL BRACING WIRE SUPPORT CONNECTIONS TO THE FRAMING.

9. **RE-USE OF EXISTING CEILING HANGER WIRES AND BRACING WIRES:**
9.1 THE GAGE AND SPACING OF THE WIRES MUST COMPLY WITH THE CURRENT APPLICABLE CODES.
9.2 ALL EXISTING CEILING HANGER WIR



SITE PLAN NOTES

1. EXISTING 4"C., REMOVE CONDUCTORS AND PULL IN NEW (1) 6-STRAND SINGLEMODE FIBER OPTIC DATA CABLE IN INNERDUCT
2. SEE SINGLE LINE DIAGRAM
3. EXISTING 2"C., REMOVE CONDUCTORS AND PULL IN NEW (1) 25 PAIR COMMUNICATION MULTI-LOOM MATCH EXISTING AT SITE.
4. EXISTING 1"C., REMOVE CONDUCTORS AND PULL IN NEW REQUIRED INTRUSION ALARM CONDUCTORS.
5. EXISTING 2"C., REMOVE CONDUCTORS AND PULL IN NEW (1) 6-STRAND SINGLEMODE FIBER OPTIC DATA CABLE IN INNERDUCT AND (8) CAT 6E DATA CABLES.
6. EXISTING 2"C., REMOVE CONDUCTORS AND PULL IN NEW (1) 25 PAIR COMMUNICATION MULTI-LOOM, (1) 10 PAIR COMMUNICATION LOOM AND REQUIRED INTRUSION ALARM CONDUCTORS - MATCH EXISTING AT SITE.

NOTES:

1. WHERE CONDUCTORS OR CABLES ARE SPECIFIED TO BE IN AN EXISTING CONDUIT, THE CONTRACTOR SHALL REMOVE ENOUGH OR ALL EXISTING CONDUCTORS/CABLES TO PULL IN NEW PLUS REPLACEMENT OF EXISTING REMOVED.
2. VERIFY EXACT LOCATIONS OF ALL BUILDING MANUFACTURERS EXISTING STUB-OUTS PRIOR TO ROUGH-IN. INCLUDE ALL COSTS IN BID.
3. CONTRACTOR SHALL PROVIDE ALL REQUIRED DIRT, SAND, ASPHALT AND CONCRETE TO PATCH ALL TRENCHES, AREA AROUND NEW PULL BOX AND AREA WHERE PADS WERE REMOVED. NEW ASPHALT SHALL MATCH EXISTING ELEVATIONS OF EXISTING SURROUNDING ASPHALT.
4. ALL DATA AND COMMUNICATION CABLES INSTALLED IN UNDERGROUND CONDUIT SHALL BE AQUA (WEATHERPROOF) RATED.5.
5. ALL NEW DATA AND COMMUNICATION CABLES SHALL MATCH EXISTING AT SITE

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CLIENT:

NC STEM Center
Modulars II

Phase B

Interior
Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:
1. DATE:
2. DATE:
3. DATE:

CHECKED BY: JJC/JJR DRAWN BY: PMM
DATE: MARCH, 2014

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ELECTRICAL SITE PLAN

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ELECTRICAL SITE PLAN

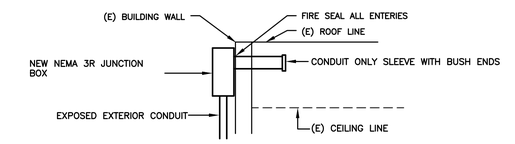
SCALE
1"=20'-0"
1

GENERAL NOTES

1. CONTRACTOR SHALL VERIFY EXISTING SITE CONDITIONS, SERVICE REQUIREMENTS AND EXACT LOCATIONS OF SERVICE FACILITIES BEFORE SUBMITTING BID. SUBMITTAL OF BID INDICATES CONTRACTOR ACCEPTS THE CONDITIONS UNDER WHICH HE SHALL BE REQUIRED TO PERFORM HIS WORK.
2. ALL ITEMS SUCH AS SERVICE CONDUIT, CONDUCTORS, DUCTS, CONCRETE PADS, TRANSFORMERS, RISERS, MANHOLES, PULL BOXES, AND PROTECTIVE COVERING FROM SERVICE LOCATION SHALL BE INSTALLED AND VERIFIED WITH THE SERVING UTILITY COMPANY. THE CONTRACTOR SHALL INSTALL THE SERVICE IN COMPLIANCE WITH THE SERVING UTILITY COMPANY, AND SHALL PAY ALL CHARGES LEVIED BY THE SERVING UTILITY COMPANY FOR HIS SERVICE EXCEPT THE FIRST BILLING DEPOSIT. WHERE THE CONTRACT DOCUMENTS ARE MORE RESTRICTIVE, THE DOCUMENTS SHALL GOVERN.
3. CONSTRUCTION TERMINOLOGY, AND THE STANDARDS OF INSTALLATION REQUIRED BY THESE CONTRACTOR DOCUMENTS ARE BASED ON PUBLISHED STANDARDS OF N.E.C.A. (NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION), NATIONAL ELECTRICAL SAFETY CODE, AMERICAN NATIONAL STANDARDS INSTITUTE DOCUMENTS, NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION, UNDERWRITERS LABORATORIES, AND THE CALIFORNIA ELECTRICAL CODE. SUBMITTAL OF BID INDICATES THE CONTRACTOR IS FAMILIAR OF THESE STANDARDS AND THE REQUIREMENTS NECESSARY TO PERFORM ALL THE WORK AS SET FORTH IN THESE CONTRACT DOCUMENTS AND ACCEPTS THE CONDITIONS.
4. SHOP DRAWINGS SHALL BE SUBMITTED WITHIN THIRTY DAYS AFTER AWARD OF THE CONTRACT. THE CONTRACTOR SHALL SUBMIT EIGHT COPIES OF A COMPLETE LIST OF MATERIALS AND EQUIPMENT INCLUDING MANUFACTURER AND MODEL NUMBER PROPOSED FOR THE JOB. SHOP DRAWINGS SHALL INCLUDE JOB DESCRIPTION, ARCHITECT AND ENGINEER IDENTIFICATION, AND ALL DATA WITH CAPACITIES, SIZES, DIMENSIONS, CATALOG NUMBERS, MANUFACTURER'S BROCHURES, AND SUPPORT DATA.
5. SUBMIT SHOP DRAWINGS FOR ALL MAJOR PIECES OF ELECTRICAL EQUIPMENT, WHICH INCLUDES, BUT NOT LIMITED TO: PANEL BOARDS, LIGHTING FIXTURES, DIMMER RACK, AUDIO SYSTEM AND ELECTRICAL COMPONENTS
6. THESE PLANS ARE DIAGRAMMATIC ONLY. FOLLOW AS CLOSELY AS POSSIBLE. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS, STRUCTURAL DETAILS, EXACT EQUIPMENT AND OUTLET LOCATIONS.
7. ROUTING OF RACEWAYS SHALL BE AT THE OPTION OF THE CONTRACTOR UNLESS OTHERWISE NOTED AND SHALL BE COORDINATED WITH OTHER TRADES.
8. DO NOT SCALE THE ELECTRICAL DRAWINGS FOR LOCATIONS OF ANY ELECTRICAL DEVICES OR EQUIPMENT,
9. CONTRACTOR SHALL PROVIDE ALL J-BOXES, PULL BOXES, ELLS, OFFSETS ETC., FOR A COMPLETE, CODE APPROVED, INSTALLATION OF ALL CONDUIT. FOOTAGE SHOWN ON ELECTRICAL SINGLE LINES AND RISER DIAGRAMS ARE FOR CALCULATION PURPOSES ONLY, AND ARE NOT FOR BIDDING PURPOSES OR MATERIAL TAKEOFF. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW AND TO COORDINATE WITH MECHANICAL, FIRE PROTECTION, AND PLUMBING DRAWINGS FOR DUCTS, LINES, AND EQUIPMENT.
10. ALL MATERIALS SHALL BE NEW, AND OF THE SAME MANUFACTURER FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY THE UNDERWRITER'S LABORATORIES FOR THE USE AND ENVIRONMENT, AND SHALL BEAR THE INSPECTION LABEL WHERE SUBJECT TO APPROVAL. MATERIALS SHALL MEET WITH THE APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY, AND ALL GOVERNING BODIES HAVING JURISDICTION. MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY A.N.S.I., U.L., N.E.M.A., AND N.B.F.U. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
11. CONTRACTOR SHALL PERFORM HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES, O.S.H.A., THE PRESENTLY ADOPTED NATIONAL ELECTRICAL CODE, AND PRESENTLY ADOPTED CALIFORNIA ELECTRICAL CODE (C.E.C.)
12. EXACT METHOD AND LOCATION OF CONDUIT PENETRATION AND OPENING IN CONCRETE WALLS OR FLOORS OR STRUCTURAL STEEL MEMBERS SHALL BE AS DIRECTED BY THE STRUCTURAL ENGINEER. PERFORM CORING, SAW CUTTING, PATCHING, AND REFINISHING OF EXISTING WALLS AND SURFACES WHEREVER IT IS NECESSARY TO PENETRATE. OPENINGS SHALL BE SEALED IN AN APPROVED METHOD TO MEET THE FIRE RATING OF THE PARTICULAR WALL, FLOOR, OR CEILING. EXACT METHOD AND LOCATIONS OF CONDUIT PENETRATIONS AND OPENINGS IN CONCRETE WALLS OR FLOORS SHALL BE U.L. APPROVED.
13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL SAW CUTTING, TRENCHING, BACKFILLING, COMPACTION, AND PATCHING OF CONCRETE AND ASPHALT AS REQUIRED TO PERFORM HIS WORK. ATTENTION IS CALLED TO THE FACT THAT THERE ARE EXISTING UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL USE EXTREME CAUTION WHEN TRENCHING FOR HIS WORK. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER AND APPROVED REPAIR OF ANY AND ALL DAMAGES CAUSED BY HIM OR HIS WORK.
14. ALL CONDUIT SHALL BE INSTALLED CONCEALED WHERE PHYSICALLY POSSIBLE.
15. CONCEALED CONDUIT SHALL BE ELECTRICAL METALLIC TUBING (E.M.T.) WITH COMPRESSION TYPE COUPLERS. SECURED WITH ONE-HOLE PIPE STRAPS.
16. P.V.C. CONDUIT SHALL BE USED UNDERGROUND ONLY, IF APPROVED BY LOCAL CODE. INSTALL PER ALL REQUIRED LOCAL CODES. ALL UNDERGROUND CONDUIT SWEEPS, UNDERGROUND RISERS, AND STUBS ABOVE GRADE SHALL BE I.M.C. WITH HALF-LAPPED TAPE COVERING OR FACTORY INSTALLED P.V.C. COATING. ROUTE ALL UNDERGROUND CONDUITS AROUND PROPOSED BUILDING AND FUTURE BUILDING LOCATIONS.
17. UNDERGROUND CONDUIT INSTALLATION DEPTH SHALL BE PER THE FOLLOWING CURRENT N.E.C.:
    +24" BELOW TURF
    +22" BELOW 2" CONCRETE AND ASPHALT
    +20" BELOW 4" NON VEHICLE CONCRETE OR ASPHALT
    +20" BELOW STREETS, HIGHWAYS, ALLEYS, DRIVEWAYS OR PARKING LOTS
18. ALL CONDUIT ONLY (C.O.) SHALL HAVE A 3/16" PULL WIRE OR ROPE, MINIMUM.
19. CONDUIT SHOWN AS EXPOSED OR APPROVED FOR EXTERIOR EXPOSED INSTALLATION SHALL BE INTERMEDIATE METALLIC CONDUIT (I.M.C.). SECURED WITH TWO-HOLE MALLEABLE PIPE STRAPS AND SCREWS. ALL BOXES AND FITTINGS SHALL BE SUPPORTED AND SECURED IN COMPLIANCE WITH C.E.C. ARTICLE 370.
20. CONDUIT SHOWN AS EXPOSED OR APPROVED FOR INTERIOR EXPOSED INSTALLATION, IN PUBLIC AREAS, SHALL BE WIREMOLD INSTALLED IN PARALLEL OR IN RIGHT ANGLES WITH ALL REQUIRED MOUNTING ACCESSORIES.
21. CONDUIT SHOWN AS EXPOSED OR APPROVED FOR INTERIOR EXPOSED INSTALLATION, IN NON-PUBLIC AREAS, SHALL BE E.M.T. INSTALLED IN PARALLEL OR IN RIGHT ANGLES WITH ALL REQUIRED MOUNTING ACCESSORIES.
22. PENETRATIONS TO FIRE-RATED MATERIALS SHALL BE RESTORED TO EQUAL RATING AS REQUIRED BY THE STATE FIRE MARSHAL AND ALL OTHER GOVERNING BODIES.
23. ALL CONDUCTORS OF EVERY SYSTEM SHALL BE PERMANENTLY TAGGED IN COMPLIANCE WITH O.S.H.A.
24. THE COMPLETE ELECTRICAL SYSTEM SHALL BE GROUNDED IN ACCORDANCE WITH THE PRESENTLY ADOPTED EDITION OF THE C.E.C., ARTICLE #250.
25. CONDUCTORS SHALL BE CODE GRADE, 600 VOLT CLASS, COPPER, MARKED 24" ALONG IT'S LENGTH SHOWING MANUFACTURER'S NAME, MAXIMUM ALLOWABLE VOLTAGE AND SIZE. CONDUCTORS SHALL BE TYPE "THWN" (WET) OR "THHN" (DRY). DELIVER CONDUCTORS TO THE JOB SITE IN UNBROKEN PACKAGES.
26. THE EXACT LOCATION OF ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE COORDINATED WITH THE ARCHITECTURAL ELEVATIONS, DETAILS, OR SECTIONS PRIOR TO INSTALLATION. ALL ELECTRICAL DEVICES AND EQUIPMENT SHALL BE RECESSED IN WALLS UNLESS OTHERWISE NOTED
27. REVIEW ARCHITECTURAL ELEVATIONS OF CASEWORK. OUTLETS MOUNTED ABOVE, BELOW, OR ADJACENT TO CASEWORK SHALL BE COORDINATED WITH THE ARCHITECTURAL DRAWINGS, PRIOR TO FINAL ROUGH-IN. ELECTRICAL DRAWINGS SHALL GOVERN NUMBER AND TYPE OF OUTLETS. PROVIDE CONDUIT, WIRES, AND OUTLETS FOR WORK REQUIRED IN CASEWORK INSTALLATIONS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CUT-OUTS IN TILE WHERE ELECTRICAL DEVICES OCCUR. PROVIDE BOX EXTENSIONS THROUGH ALL CASEWORK. FINISH FLUSH WITH FACE OF CABINET, ETC.
28. ARCHITECTURAL REFLECTED CEILING PLANS INDICATING THE LOCATION OF LIGHTING FIXTURES SHALL TAKE PRECEDENCE OVER THE LOCATIONS OF SAME AS SHOWN ON THE ELECTRICAL DRAWINGS. INSTALL THE LIGHTING FIXTURES IN ANY GIVEN AREA TO AGREE WITH THE REFLECTED CEILING PLANS. DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT.
29. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY TYPE OF CEILING SYSTEMS AND TO FURNISH APPROVED LIGHTING FIXTURES OF THE TYPE REQUIRED FOR MOUNTING IN SUBJECT CEILING. WHERE FIXTURES ARE RECESSED IN PLASTER OR DRYWALL CEILINGS, THEY SHALL BE COMPLETE WITH NECESSARY MOUNTING HARDWARE AND PLASTER FRAMES.
30. PROVIDE ALL LAMPS, HANGERS, CLIPS, SEISMIC SUPPORTS, LENSES, ETC. PER ALL REQUIRED CODES FOR A COMPLETE LIGHTING FIXTURE.
31. ALL LOW VOLTAGE ELECTRONIC SYSTEMS CONDUCTORS AND EQUIPMENT SHALL BE INSTALLED BY AN ELECTRONIC SYSTEMS CONTRACTOR WHO HOLDS A VALID C-7 & C-10 LICENSE EQUIPMENT SHALL MATCH EXISTING AND SHALL BE INSTALLED IN ACCORDANCE WITH SPECIFICATIONS PROVIDED BY THE FACTORY AUTHORIZED DISTRIBUTOR OF THE EXISTING SYSTEM. NEW COMPONENTS INSTALLED SHALL BE COVERED BY FULL WRITTEN WARRANTY, FOR ALL PARTS AND INSTALLATION ON THE ENTIRE SYSTEM. CABLE SPLICES IN UNDERGROUND PULL BOXES ARE ABSOLUTE ELY PROHIBITED.
32. ALL VIDEO TRUNK CABLE SHALL BE COAX 500 WITH COMPATIBLE TERMINATION DESIGNED FOR 500 SERIES CABLE. EACH OUTLET SHALL BE TESTED AND MEASURE (0) ZERO D.B.M. MINIMUM. CONTRACTOR SHALL INCLUDE ALL REQUIRED ADDITIONAL AMPLIFICATION EQUIPMENT IN BID.
33. PROVIDE ALL REQUIRED SEISMIC STRAYS FOR PENDANT LIGHT FIXTURES AS REQUIRED FOR ALL PENDANT LIGHT FIXTURES AS REQUIRED TO MEET CODE.
34. PROVIDE THE OWNER WITH ONE (1) SET OF COMPLETE, UP TO DATE, "AS-BUILT" REPRODUCIBLE DRAWINGS AT THE COMPLETION OF THE PROJECT, SHOWING ACTUAL DEPTHS OF UNDERGROUND CONDUIT RUNS AT ALL LOCATIONS. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO THE OWNER AT PROJECT COMPLETION.
35. THE COMPLETE PROJECT SHALL BE GUARANTEED FOR A PERIOD OF ONE (1) YEAR, AFTER DATE OF ACCEPTANCE, BY OWNER. ANY WORK, MATERIAL OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED IN A TIMELY MANNER, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
36. WHERE A CONFLICT OCCURS BETWEEN THESE NOTES, THE ELECTRICAL DRAWINGS OR THE ELCTRCIAL BOOK SPECIFICATIONS ISSUED AS A PART OF THESE DOCUMENTS, THE MORE STRINGENT REQUIREMENT SHALL PREVAIL.
37. PANEL BOARDS SHALL BE COPPER "BOLT-ON" TYPE. COMPONENTS AND FEATURES SHALL BE IN STRICT ACCORDANCE WITH THE SERVING UTILITIES, CODE ENFORCING AGENCY, ELECTRICAL DRAWINGS, AND MAIN SERVICE MANUFACTURER AND OPERATING CHARACTERISTICS.
38. PROVIDE ENGRAVED PLASTIC NAMEPLATES FOR ALL SWITCHBOARDS, PANEL BOARDS, LOAD CENTERS, TRANSFORMERS, AND TERMINAL CABINETS. PLATES SHALL BE 3 PLY, BLACK FACE, WHITE CORE, WITH ¼" HIGH GOTHIC LETTERING.
39. HAND THE OWNER ONE SPARE SET OF EACH SIZE AND TYPE OF FUSE INSTALLED ON THIS PROJECT.

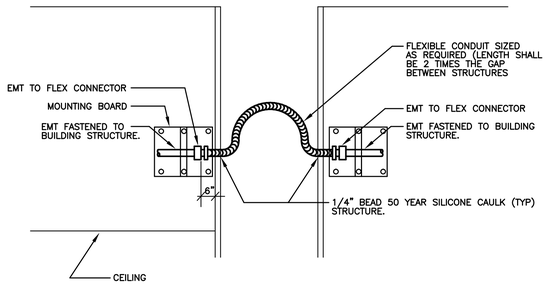
DEMOLITION NOTES

1. IN GENERAL, ELECTRICAL EQUIPMENT WHETHER SHOWN ON THIS DRAWING OR NOT, THAT IS LOCATED IN REMOVED WALLS, FLOORS OR CEILINGS SHALL BE REMOVED UNLESS OTHERWISE NOTED.
2. CONTRACTOR SHALL VISIT THE SITE. HE/SHE SHALL THOROUGHLY INVESTIGATE THESE EXISTING CONDITIONS AND, BY SUBMITTING A BID, ACCEPTS CONDITIONS UNDER WHICH HE/SHE WILL BE REQUIRED TO PERFORM THE FULL SCOPE OF WORK.
3. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO DISCONNECT AND REMOVE ALL EXISTING LIGHTING FIXTURES RECEPTACLES, ELECTRICAL EQUIPMENT, ETC., AFFECTED BY THE REMODELED AREA. THIS WILL INCLUDE RE-ROUTING OR EXTENDING OF EXISTING CONDUIT AND FEEDERS WHERE NECESSARY TO MAINTAIN THE CONTINUITY OF THE EXISTING EQUIPMENT OR DEVICES THAT ARE TO REMAIN.
4. ALL CIRCUIT NUMBERS AND EXISTING CONDUIT RUNS SHOWN ON THESE DRAWINGS WERE TAKEN FROM EXISTING PANEL SCHEDULES AND "AS BUILT" RECORDS. IT SHALL BE THIS CONTRACTOR'S RESPONSIBILITY TO VERIFY EXISTING AND ADJUST CIRCUIT NUMBERS ACCORDING TO EXISTING CONDITIONS IF REQUIRED.
5. IT IS THE RESPONSIBILITY OF THIS CONTRACTOR TO MAINTAIN CONTINUITY OF ALL ELECTRICAL SYSTEMS, EQUIPMENT, ETC., REMAINING IN OPERATION WHICH ARE BEING FED BY AN ABANDONED OUTLET. MAINTAINING CONTINUITY SHALL CONSIST OF RE-ROUTING OF CONDUIT, WIRE, ETC., AS REQUIRED.
6. EXISTING CONDUIT MAY BE RE-USED IF ADEQUATELY SIZED PER C.E.C., BUT IN NO CASE SHALL ANY EXISTING CONDUCTORS THAT HAVE BEEN REMOVED, BE RE-USED.
7. CONTRACTOR SHALL PATCH ALL WALLS AND CEILINGS WHERE ELECTRICAL DEVICES ARE REMOVED.
8. EXISTING JUNCTION BOXES TO REMAIN SHALL HAVE BLANK STEEL COVER PLATE PROVIDED.
9. ALL EXPOSED INTERIOR AND EXTERIOR CONDUCTORS AND CABLES SHALL BE COMPLETELY REMOVED
10. ALL EXISTING LIGHT FIXTURES, SWITCHES AND RECEPTACLES TO REMAIN THAT ARE DAMAGED, DISCOLORED OR FAULTY SHALL BE REPLACED VERIFY PRIOR TO BID.
11. ALL EXISTING LIGHT FIXTURES, SWITCHES AND RECEPTACLES TO REMAIN SHALL BE CLEANED.
12. UNLESS SPECIFICALLY SHOWN ON THREE PLANS NO STRUCTURAL MEMBERS SHALL BE CUT, DRILLER NOR NOTCHED WITHOUT PRIOR WRITTEN AUTHORIZATION FROM THE STRUCTURAL ENGINEER AND THE DISTRICT STRUCTURAL ENGINEER FROM THE DIVISION OF THE STATE ARCHITECT



DATA CONDUIT ENTRY DETAIL

SCALE N.T.S. 1


EMT TO FLEX CONNECTOR
MOUNTING BOARD
EMT FASTENED TO BUILDING STRUCTURE.
FLEXIBLE CONDUIT SIZED AS REQUIRED (LENGTH SHALL BE 2 TIMES THE GAP BETWEEN STRUCTURES
EMT TO FLEX CONNECTOR
EMT FASTENED TO BUILDING STRUCTURE.
6"
1/4" BEAD 50 YEAR SILICONE CAULK (TYP) STRUCTURE.
CEILING

CONDUIT SLEEVE DETAIL

SCALE N.T.S. 3

ELECTRICAL SYMBOLS LIST

- RECESS MOUNTED CEILING LIGHT FIXTURE-REFER TO FIXTURE SCHEDULE.
- SURFACE MOUNTED WALL LIGHT FIXTURE-REFER TO FIXTURE SCHEDULE.
- SHADED AREA INDICATES THAT THE LIGHT FIXTURE IS ON AN EMERGENCY SYSTEM, BATTERY, OR IS A NIGHT LIGHT FIXTURE.
- EXIT SIGN, WALL MOUNTED-REFER TO LIGHTING FIXTURE SCHEDULE
- DUPLEX RECEPTACLE, WALL MOUNTED +15" A.F.F. TO BOTTOM OR AS NOTED.
- QUADPLEX RECEPTACLE, WALL MOUNTED +15" A.F.F. TO BOTTOM OR AS NOTED.
- (J) JUNCTION BOX, ACCESSIBLE AND MOUNTED FOR THE APPLICATION DENOTED ON PLANS.
- (J) JUNCTION BOX, WALL MOUNTED. FIELD VERIFY MOUNTING HEIGHT PRIOR TO ROUGH-IN.
- DATA/TELEPHONE OUTLET +15" TO BOTTOM OR AS NOTED W/ CAT 6E DATA CABLES AS SHOWN ON PLANS
- TELEPHONE OUTLET +48" A.F.F. TO BOTTOM OR AS NOTED W/ I.P. BASED HANDSET AND COMMUNICATION CABLE AS SHOWN MATCH EXISTING AT SITE.
- DATA OUTLET FLUSH IN CEILING W/ CAT 6E CABLES AS SHOWN
- 4'-4'x3/4" MARINE PLYWOOD COMMUNICATION TERMINAL BACKBOARD 1"C. W/ TWO COATS OF WHITE PAINT AND REQUIRED ACCESSORIES
- FLUSH MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- SURFACE MOUNTED ELECTRICAL PANELBOARD OR LOAD CENTER. REFER TO PANEL SCHEDULE.
- DISTRIBUTION SWITCHBOARD REFER TO SINGLE LINE DIAGRAM.
- GROUND CONNECTION, SIZE AS INDICATED OR AS REQUIRED.
- $S_{a,b}$ SINGLE POLE WALL SWITCH, +48" A.F.F. TO TOP SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING:
  - 2 - DOUBLE POLE
  - 3 - THREE WAY
  - P - PILOT LIGHT
  - R - REMOTE CONTROL SWITCH
  - M - MOTOR STARTING SWITCH
- LARGE AREA ROOM OCCUPANCY SENSOR UNIT W/ DUAL SWITCH PACKS. WHEN MULTIPLE SENSORS ARE USED IN ONE ROOM THEY SHALL ALL BE INTERCONNECTED
- ROOM OCCUPANCY SENSOR AUTOMATIC LIGHTING CONTROL WALL SWITCH +48" A.F.F. TO TOP
- [M] CEILING MOUNTED INTRUSION ALARM MOTION SENSOR-MATCH EXISTING AT SITE.
- [D] INTRUSION ALARM DOOR CONTACT IN DOOR JAMB MATCH EXISTING AT SITE.
- —C— (1) COMMUNICATION, MATCH EXISTING ON SITE
- —A— 3/4"C. W/ REQUIRED INTRUSION ALARM CABLE, MATCH EXISTING ON SITE.
- —D— (1) CAT 6E DATA CABLE, PER SPECIFICATIONS
- —2D— (2) CAT 6E DATA CABLE, PER SPECIFICATIONS
- —4D— (4) CAT 6E DATA CABLE, PER SPECIFICATIONS
- —6D— (6) CAT 6E DATA CABLE, PER SPECIFICATIONS
- —12D— (12) CAT 6E DATA CABLE, PER SPECIFICATIONS
- —16D— (12) CAT 6E DATA CABLE, PER SPECIFICATIONS
- INDICATES WEATHERTIGHT FLEXIBLE CONNECTION TO EQUIPMENT.
- A-1,3,5 HOME RUN TO PANEL. LETTER DESIGNATES PANEL, NUMBER INDICATES CIRCUITS.
- CONDUIT RUN CONCEALED, IN WALLS, FLOOR, OR ABOVE CEILING.
- CONDUIT RUN CONCEALED BELOW GRADE, 3/4"C MINIMUM.
- CONDUIT STUB OUT, CAP & MARK.
- BRANCH CIRCUIT WIRING, 2 #12 IN 1/2" CONDUIT OR AS NOTED OR SYMBOLIZED
  - 1/2"C-3 #12
  - 1/2"C-4 #12
  - 1/2"C-5 #12
  - 3/4"C-6 #12
  - 3/4"C-7 #12
  - 3/4"C-8 #12
- 1A / 100 / 2 LIGHT FIXTURE CALL OUT, "1A" INDICATES FIXTURE TYPE (REFER TO FIXTURE SCHEDULE), "100" INDICATES TOTAL FIXTURE WATTAGE. NUMBER ADJACENT INDICATES QUANTITIES. (NUMBER 2 IS SHOWN FOR BRANCH CIRCUIT PURPOSE ONLY, NOT FOR MATERIAL TAKE-OFF).
- 3 / E-1 DETAIL CALLOUT, "3" INDICATES DETAIL NUMBER "E-1" INDICATES SHEET NUMBER.

CO	CONDUIT ONLY, WITH PULL ROPE.
MH	MOUNTING HEIGHT
WP	WEATHERPROOF, NEMA 3R
PROVIDE	FURNISH, INSTALLED AND CONNECTED, COMPLETE.
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
C	CONDUIT
OFCI	OWNER FURNISHED, CONTRACTOR INSTALLED.
ADA	AMERICANS WITH DISABILITY ACT
E/G	EQUIPMENT GROUND (GREEN)
U.O.N.	UNLESS OTHERWISE NOTED

- (2) PLAN NOTE REFERENCE.
- (4) REVISION REFERENCE.

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JOSEPH J RODRIGUEZ No. E 11795 EXP. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

CLIENT:

NC STEM Center Modulars II

Phase B

Interior Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:

1 DATE:
2 DATE:
3 DATE:

CHECKED BY: JJC/JJR DRAWN BY: PMM
DATE: MARCH, 2014

SHEET TITLE:

SYMBOL LIST GEN. NOTES & DETAILS

SHEET NO:

E-1.0

10286 / 1955 E-1.0

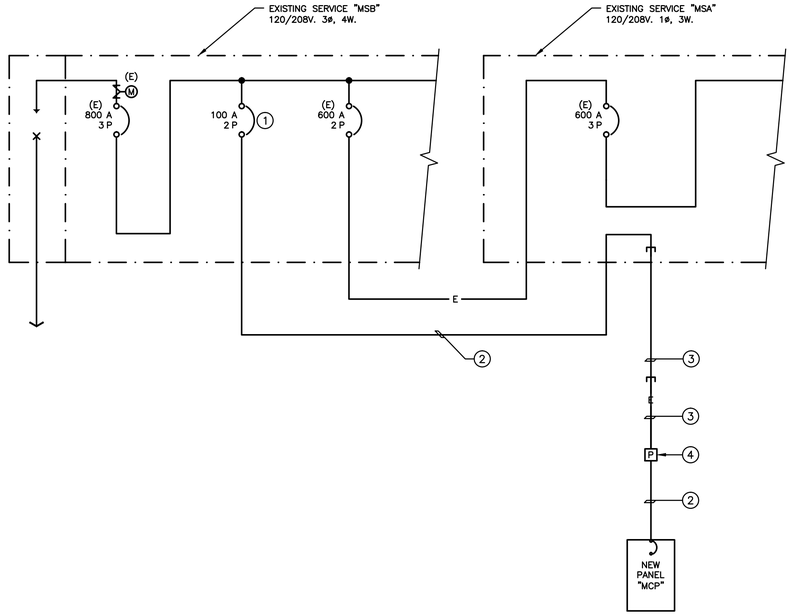
LIGHTING FIXTURE SCHEDULE

REFER TO DIVISION 1, GENERAL REQUIREMENTS, REGARDING PRODUCT OPTIONS AND SUBSTITUTION. WHERE THREE OR MORE MANUFACTURERS ARE LISTED IN THE FOLLOWING LIGHTING FIXTURE SCHEDULE, SUBSTITUTION WILL NOT BE CONSIDERED. WHERE PRODUCTS ARE LISTED BY NAMING ONE OR MORE MANUFACTURERS, WITHOUT "OR EQUAL" PROVISION FOR SUBSTITUTION, CONTRACTOR SHALL INCLUDE ONLY SPECIFIED PRODUCTS IN BID.

TYPE	MANUFACTURER	CATALOG NUMBER	VOLTAGE	MOUNTING	LAMPS [2]		DESCRIPTION
					NUMBER	TYPE	
1A / 88	COLUMBIA	4PS-24-3-32-G-RS-A12 (.125)-EB8-120	120	RECESS T-BAR	3	F32T8 SPX35K	2'x4' 3 LAMP TROFFER WITH WHITE REGRESSED HINGE & LATCH DOOR FRAME, PRISMATIC ACRYLIC PATTERN 12 DIFFUSER, HIGH FREQ. (1) 3-LAMP ELECTRONIC BALLAST
1AE / 88	COLUMBIA	4PS-24-2-32-G-RS-A12 (.125)-EB8-120-EM	120	RECESS T-BAR	3	F32T8 SPX35K	SAME AS "1A" EXCEPT [1]
1S / 20	KENALL LIGHTING	MS11EL-PP-DB-18L480K-120-9500-BPC	120	SURFACE AT EXISTING JUNCTION BOX	N/A	LED 40K	HIGH ABUSE L.E.D. AREA FIXTURE W/ EYEBROW, PHOTOCELL AND [1]
1X / 5	EVENLITE	RZR-EM-R-I-AA-W-SD	120	WALL +6" ABOVE DOOR	COMPLETE		SINGLE FACE L.E.D. EXIT SIGN W/ BRUSHED ALUMINUM HOUSING AND 90 MINUTE BATTERY PACK

NOTE:

[1] PROVIDE 90 MINUTE EMERGENCY BATTERY PACK 1100 LUMENS MINIMUM.

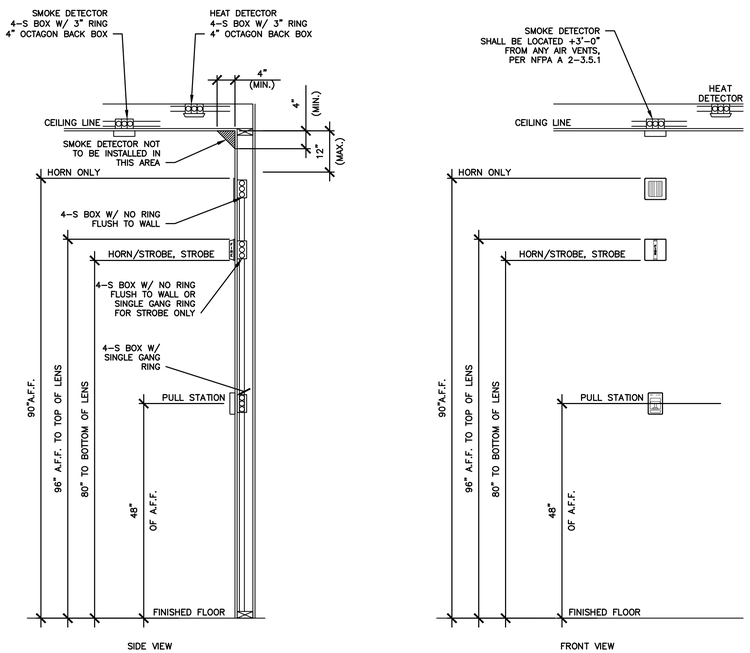


SINGLE LINE DIAGRAM NOTES:

1. PROVIDE NEW CIRCUIT BREAKER MATCH EXISTING MANUFACTURER AND OPERATING CHARACTERISTICS.
2. 2"C. 4 #1 & 1 #6 E/G.
3. EXISTING 2"C.O. PULL IN NEW 4 #1 & 1 #6 E/G.
4. INTERCEPT CONDUIT PROVIDE PULLBOX AND EXTEND AS SHOWN.

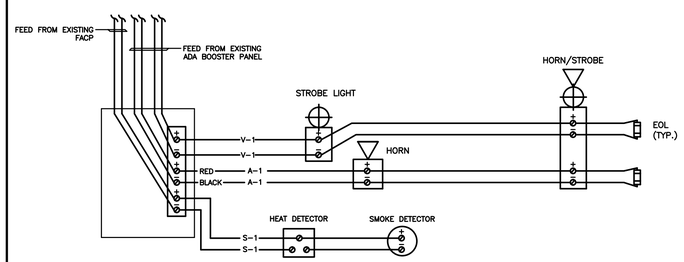
SINGLE LINE DIAGRAM

SCALE N.T.S (1)


SMOKE DETECTOR 4-S BOX W/ 3" RING 4" OCTAGON BACK BOX
HEAT DETECTOR 4-S BOX W/ 3" RING 4" OCTAGON BACK BOX
4" (MIN.)
4" (MIN.)
CEILING LINE
SMOKE DETECTOR NOT TO BE INSTALLED IN THIS AREA
12" (MAX.)
HORN ONLY
4-S BOX W/ NO RING FLUSH TO WALL
HORN/STROBE, STROBE
4-S BOX W/ NO RING FLUSH TO WALL OR SINGLE GANG RING FOR STROBE ONLY
4-S BOX W/ SINGLE GANG RING
PULL STATION
90"A.F.F.
96" A.F.F. TO TOP OF LENS
80" TO BOTTOM OF LENS
48" OF A.F.F.
FINISHED FLOOR
SIDE VIEW
SMOKE DETECTOR SHALL BE LOCATED +3'-0" FROM ANY AIR VENTS, PER NFPA A 2-3.5.1
HEAT DETECTOR
CEILING LINE
HORN ONLY
HORN/STROBE, STROBE
PULL STATION
90"A.F.F.
96" A.F.F. TO TOP OF LENS
80" TO BOTTOM OF LENS
48" OF A.F.F.
FINISHED FLOOR
FRONT VIEW

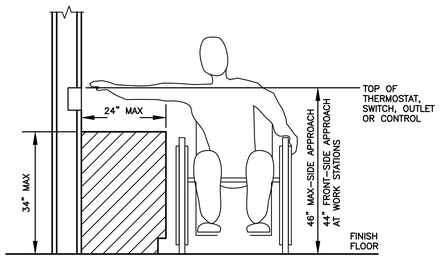
FIRE ALARM DEVICE MOUNTING HEIGHTS

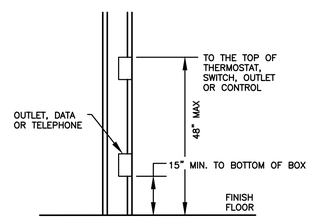
SCALE N.T.S. (4)



FIRE ALARM POINT BY POINT

SCALE N.T.S. (3)





MOUNTING OVER OBSTRUCTION

SCALE N.T.S. (2)

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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JOSEPH J RODOVICH No. E 11795 EXP. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

CLIENT:

NC STEM Center
Modulars II

Phase B

Interior
Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:

1 DATE:
2 DATE:
3 DATE:

CHECKED BY: JJC/LJR DRAWN BY: PMM
DATE: MARCH, 2014

SHEET TITLE:

DEMO FLOOR & CEILING PLANS

SHEET NO:

E-1.1

10286 / 1955 E-1.1

SYMBOL	MANUFACTURE & MODEL	DESCRIPTION	AMOUNT	C.S.F.M. NUMBER
FACP	FCI E3	EXISTING ADDRESSIBLE FIRE ALARM CONTROL PANEL	0	7165-1703:0125
ADA	FCI HPF2456	FIRE ALARM ADA BOOSTER	1	7315-1637:0102
SD	FCI ASD-PL2F ADB-FL	FIRE ALARM SMOKE DETECTOR MOUNTED SURFACE TO CEILING.	12	7272-1703:0121 7300-1703:0103
HD	FCI ATD-RL2F ADB-FL	FIRE ALARM HEAT DETECTOR SURFACE IN ATTIC SPACE	21	7270-1703:0115 7300-1703:0103
	FCI MS-7AF	FIRE ALARM PULL STATION +48" A.F.F. TO TOP OF HANDLE	1	7250-1703:0119
	SYSTEM SENSOR HRK	FIRE ALARM HORN MTD. AT +80" A.F.F.	4	7135-1653:0189
15	SYSTEM SENSOR SR	FIRE ALARM STROBE LIGHT MTD. +80" A.F.F. NUMBER INDICATES CANDELA RATING.	1	7125-1653:0186
15	SYSTEM SENSOR SCR	FIRE ALARM STROBE LIGHT MTD. CEILING MOUNTED NUMBER INDICATES CANDELA RATING.	2	
15	SYSTEM SENSOR P4R	FIRE ALARM STROBE LIGHT MTD. +80" A.F.F. NUMBER INDICATES CANDELA RATING.	3	7125-1653:0188
75			1	
110			1	
110	SYSTEM SENSOR PC4R	FIRE ALARM STROBE LIGHT CEILING MOUNTED NUMBER INDICATES CANDELA RATING.	1	

SPECIAL FIRE ALARM NOTES:

ALL DEVICE SHOWN ON THIS FIRE ALARM RISER ARE NEW UNLESS NOTED OTHERWISE.

SEE ELECTRICAL SITE AND ENLARGED FOR NEW DEVICES ADDITION OF ZONES, CONDUIT AND CONDUCTOR REQUIREMENTS.

	EXISTING FACP		
	BATTERY CALCULATIONS		
MODEL #	QTY. ADDED	STD-BY (AMPS)	ALARM (AMPS)
E3	0	N/A	N/A
ASD	12	.0036	.078
ATD	21	.0063	.137
MS-74E	1	.0003	.003

STAND-BY LOAD =.0102 MA
STAND-BY TIME =24 HRS.
STAND-BY =.245 AHR

ALARM MODE =.218 MA
ALARM TIME =15/60 HRS. (.25)
ALARM =.055 AHR

STAND-BY+ALARM
.245 AHR+.055 AHR =.300 AHR
(2) EXISTING 24.0 AHR BATTERIES
5.15 -.300 =4.85 AHR(SPARE)
(SPARE)

	NEW ADA BOOSTER		
	BATTERY CALCULATIONS		
MODEL #	QTY. ADDED	STD-BY (AMPS)	ALARM (AMPS)
HPF24S6	1	.065	.910
SR (15)	1	.0	.066
SCR (15)	2	.0	.132
P4R (15)	3	.0	.372
P4R (75)	1	.0	.216
P4R (110)	1	.0	.260
PC4R (110)	1	.0	.260
HRK	4	.0	.232

STAND-BY LOAD =.065 MA
STAND-BY TIME =24 HRS.
STAND-BY =1.56 AHR

ALARM MODE =2.45 MA
ALARM TIME =15/60 HRS. (.25)
ALARM =.613 AHR

STAND-BY+ALARM
1.56 AHR+.613 AHR =2.17 AHR
(2) NEW 6.0 AHR BATTERIES
6.0-2.17 =3.82 AHR(SPARE)

VOLTAGE DROP CALCULATIONS:

VISUAL DEVICE VOLTAGE DROP – ZONE V

V =IR
I =
(1) NEW CEILING STROBE 15cd (1x.066)
* (1) NEW CEILING HORN/STROBE 110cd (1x.202) =.268

R =2.05 (#12)x80' =.164
1000

V =.268x.164 /24% =.432%

AUDIBLE ZONE VOLTAGE DROP – ZONE A

V =IR
I =
(3) NEW HORN (3x.058)
** (1) NEW CEILING HORN/STROBE 110cd (2x.058) =.232

R =2.05 (#12)x100' =.205
1000

V =.232x.205 /24% =.20%

VISUAL DEVICE VOLTAGE DROP – ZONE VA

V =IR
I =
(1) NEW CEILING STROBE 15cd (1x.066)
(1) NEW WALL STROBE 15cd (1x.066)
* (3) NEW WALL HORN/STROBE 15cd (3x.066)
* (1) NEW CEILING HORN/STROBE 75cd (3x.158)
(1) NEW CEILING HORN/STROBE 110cd (1x.202) =.690

R =2.05 (#12)x680' =1.39
1000

V =.690x1.39 /24% =4.0%

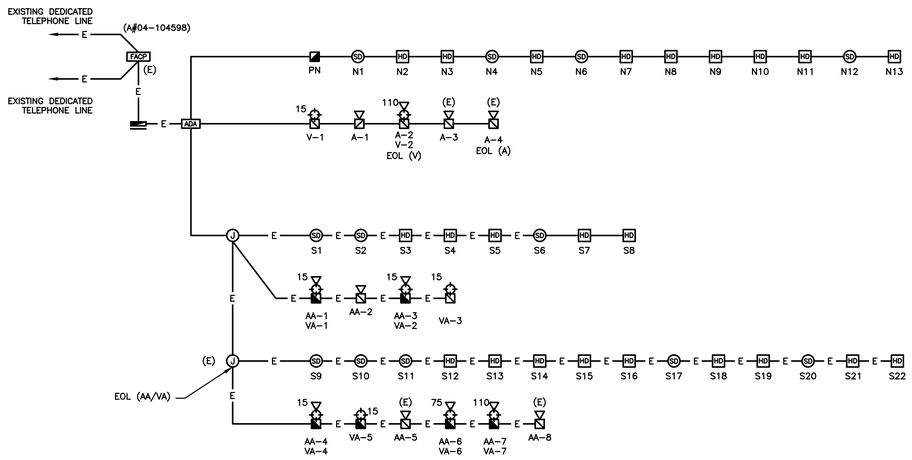
AUDIBLE ZONE VOLTAGE DROP – ZONE AA

V =IR
I =
(3) NEW HORN (3x.058)
** (3) NEW WALL HORN/STROBE 15cd (3x.058)
** (1) NEW CEILING HORN/STROBE 75cd (1x.058)
** (1) NEW CEILING HORN/STROBE 110cd (1x.058)

R =2.05 (#12)x730' =1.50
1000

V =.464x1.50 /24% =2.90%

* DENOTES VISUAL LOAD ONLY
** DENOTES



SEQUENCE OF OPERATION

DEVICE / ACTION	AREA SMOKE DETECTOR	HEAT DETECTOR	PULL STATION	AC LOSS	OPEN SHORT GROUND
ANNUNCIATE AT FIRE CONTROL PANEL AND REMOTE ANN. IF APP.	X	X	X	X	X
ACTIVATE AUDIBLE & VISUAL SIGNALS THROUGHOUT BUILDING	X	X	X		
TROUBLE				X	X

COMPLETE FIRE ALARM SUBMITTAL

FIRE ALARM GENERAL NOTES:

1. EXISTING SYSTEM IS AN ADDRESSABLE AUTOMATICALLY ACTIVATED POWER LIMITED 24V DC SUPERVISED FIRE ALARM SYSTEM AS SHOWN, IN COMPLIANCE WITH 2013 CALIFORNIA BUILDING CODE THE 2010 CALIFORNIA ELECTRICAL CODE, 2013 N.F.P.A. 72 AND 2013 CALIFORNIA FIRE CODE.
2. FIRE ALARM CABLE SPLICES IN UNDERGROUND PULL BOXES ARE ABSOLUTELY PROHIBITED.
3. ALL FIRE ALARM CONDUIT SHALL BE 3/4"C. UNLESS NOTED OTHERWISE. ALL FIRE ALARM CONDUCTORS SHALL BE INSTALLED IN AN APPROVED RACEWAY.
4. ALL CONDUCTORS SHALL BE THWN (WET) 600V. USING #12, AWG. FOR ALL VISUAL/AUDIBLE FA DEVICE POWER CIRCUITS UNLESS NOTED OTHERWISE.
5. ALL CONDUCTORS SHALL BE USING #16 TWISTED PAIR FOR ALL INITIATION CIRCUITS UNLESS NOTED OTHERWISE ALL UNDERGROUND CONDUCTORS SHALL BE WEATHERPROOF RATED.
6. CONTRACTOR SHALL FIELD VERIFY NEW DEVICES AND MATCH EXISTING PRIOR TO ROUGH-IN.
7. COLOR CODING OF CONDUCTORS AS RECOMMENDED BY MANUFACTURERS REPRESENTATIVE AND AS INDICATED BELOW:
8. FIRE ALARM SMOKE/HEAT-(1)LT. BLUE (NEG.), (1) YELLOW (POS.)
   FIRE ALARM AUDIBLE-(1)BLACK (NEG.), (1)RED (POS.).
   FIRE ALARM VISUAL (1) GREY (NEG.) (1) PINK (POS.)
9. ALL CONDUCTORS INSTALLED IN UNDERGROUND CONDUIT SHALL BE AQUA RATED.
10. INSTALLATION OF THE INSTALLATION OF THE SYSTEMS SHALL NOT BE STARTED UNTIL DETAILED DESIGN DOCUMENTS AND SPECIFICATION, INCLUDING STATE FIRE MARSHAL LISTING NUMBERS FOR EACH COMPONENT OF THE SYSTEM SHALL BE MADE IN THE PRESENCE OF DSA.
11. UPON COMPLETION OF THE INSTALLATION OF THE SYSTEMS, A SATISFACTORY TEST OF THE ENTIRE SYSTEM SHALL BE MADE IN THE PRESENCE OF A DSA PROJECT INSPECTOR.
12. A STAMPED SET OF APPROVED FIRE ALARM DESIGN DOCUMENTS SHALL BE ON THE SITE AND USED FOR INSTALLATION.
13. ANY DISCREPANCIES BETWEEN THE DRAWING AND THE CODE OR RECOGNIZED STANDARDS SHALL BE BROUGHT TO THE ATTENTION OF DSA AND THE ARCHITECT/ENGINEER OF THE PROJECT.
14. DSA ARCHITECT/ENGINEER AND OWNER SHALL BE NOTIFIED A MINIMUM OF 48 HOURS PRIOR TO THE FINAL INSPECTION AND/OR TESTING.
15. ALL PENETRATIONS THROUGH RATED ASSEMBLIES, REQUIRING OPENING PROTECTION SHALL BE PROVIDED WITH A PENETRATION FIRE STOP SYSTEM AS IDENTIFIED WITHIN CBC CHAPTER 7, UL OR OTHER LAB TESTING CRITERIA. APPROVED TYPE OF MATERIALS SHALL IDENTIFIED WITHIN THE SPECIFICATION WITHIN THE FIRE ALARM SECTION.
16. WALL MOUNTED VISUAL NOTIFICATION DEVICES SHALL HAVE THEIR BOTTOMS MOUNTED AT 80" MINIMUM AND 96" MAXIMUM FROM FINISHED FLOOR.
17. WALL MOUNTED AUDIBLE NOTIFICATION DEVICES SHALL HAVE THEIR TOPS MOUNTED AT 90" MINIMUM AND 100" MAXIMUM FROM FINISHED FLOOR AND NO CLOSER THEN 6" TO A HORIZONTAL STRUCTURE.
18. AUDIBLE DEVICES TO BE LEAST 15 DBA ABOVE THE AVERAGE AMBIENT SOUND LEVEL BUT NOT LESS THAN 75 DBA AT 10 FEET OR MORE THAN 110 DBA AT THE MINIMUM HEARING DISTANCE SOUND LEVEL SHALL BE MAINTAINED FOR DURATION OF AT LEAST 60 SECTION 5 DBA MUST BE MAINTAINED.
19. AUDIBLE DEVICES SHALL BE SYNCHRONIZED TEMPORAL CODE 3 PATTERN.
20. THE CONTRACTOR SHALL ADJUST/INSTALL ALL DEVICES TO MAXIMIZE PERFORMANCE AND TO MINIMIZE FALSE ALARMS.
21. VISUAL DEVICES SHOULD NOT EXCEED 2 FLASHES PER SECOND AND SHOULD NOT BE SLOWER THAN 1 FLASH EVERY SECOND. THE DEVICE SHALL HAVE PULSING LIGHT SOURCE NOT LESS THAN 15 CANDELA. VISUAL DEVICES WITHIN 55 FROM EACH OTHER SHALL BE SYNCHRONIZED.
22. UNDERGROUND AND EXTERIOR CONDUITS TO HAVE WATERTIGHT FITTINGS AND WIRE TO BE APPROVAL FOR WET LOCATION.
23. ALL FIRE ALARM WIRING SHALL BE FLP OR FPLP (FIRE POWER LIMITED OR FIRE POWER LIMITED PLENUM) AS REQUIRED FOR APPLICATION. WIRING IN CONDUIT ABOVE GROUND MAY BE THHN OR THWN.
24. PER CEC STANDARDS, ALL WIRING IS TO BE PULLED THROUGH EACH JUNCTION BOX AND CONNECTED DIRECTLY TO EACH FIRE DEVICE. DONOT SPLICE THE WIRE THERE MUST BE AT LEAST 6" OF LEAD WIRE FROM THE BOX TO THE DEVICE. ALL BOXES TO BE SIZED PER CEC.
25. SMOKE DETECTORS SHALL NOT BE ANY CLOSER THAN 1" FROM FIRE SPRINKLER OR 3" FROM ANY SUPPLY DIFFUSER. IN AREA OF CONSTRUCTION OR POSSIBLE DAMAGE/CONTAMINATION IN NEWLY INSTALLED FIRE ALARM DEVICES SHALL BE COVERED UNTIL THAT AREA IS READY TO BE TURNED OVER TO THE OWNER.
26. ALL FIRE ALARM CIRCUITS SHALL BE IN CONDUIT SURFACE RACEWAY OR OPEN RUN CEILINGS, UNDER FLOORS AND IN WALLS IN A NEAT AND PROTECTED MANOR AS INDICATED ON DESIGN DOCUMENTS. EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED CIRCUITS ARE ONLY PERMITTED WHEN NOTED AS EXPOSED ON DESIGN DOCUMENTS.
27. FIRE ALARM PANEL, REMOTES AND COMPONENTS SHALL BE SECURED TO MOUNTING SURFACE PER MANUFACTURERS SPECIFICATION, NO SINGLE DEVICE SHALL EXCEED THE WEIGHT OF 20 LBS. WITHOUT SPECIAL MOUNTING DETAILS.
28. A DEDICATED BRANCH CIRCUIT SHALL BE PROVIDED FOR FIRE ALARM EQUIPMENT. THIS CIRCUIT SHALL BE ENERGIZED FROM COMMON USE AREA PANEL AND SHALL HAVE NO OTHER OUTLETS THE BREAKER SHALL HAVE RED LOCKING DEVICE TO BLOCK THE HANDLE IN THE "ON" POSITION THE CIRCUIT BREAKER SHALL BE LABELED "FIRE ALARM CIRCUIT CONTROL" CIRCUIT ID TO BE LABELED AT FIRE PANEL EXTENDERS.
29. THE INSTALLING CONTRACTOR SHALL PROVIDE A RECORD OF COMPLETION PER NFPA 72, FIGURE 10.18.2.1.1.
30. CONTROL PANELS REMOTE ANNUNCIATORS SHALL BE INSTALLED WITH THEIR BOTTOMS MOUNTED AT 48"
31. THE INSTALLING CONTRACTOR SHALL PROVIDE SYSTEM PROGRAMING FOR SUPERVISORY MONITORING PER CBC SECTION 901.6.2
32. SUPERVISORY MONITORING SHALL BE TESTED AND VERIFIED AS SENDING CORRECT SIGNALS IN CONJUNCTION WITH FINAL ACCEPTANCE TEST.
33. OWNER SHALL BE RESPONSIBLE FOR ESTABLISHING A FIRE SYSTEM MONITORING CONTRACT OR PROVISIONS

FIRE ALRAM RISER

SCALE N.T.S.

2

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CLIENT:

NC STEM Center
Modulars II

Phase B

Interior
Renovations

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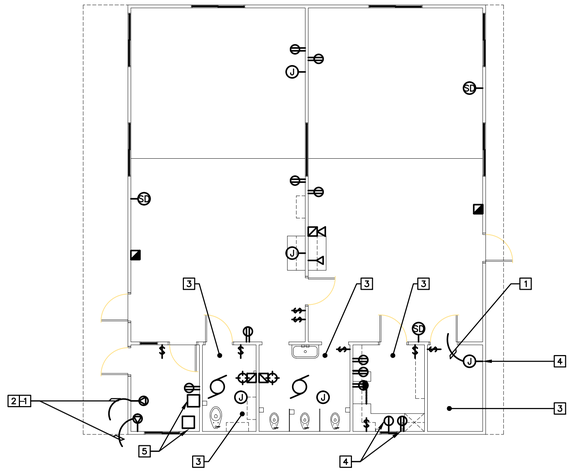
APPROVALS:

REVISIONS:
1 DATE:
2 DATE:
3 DATE:
CHECKED BY: JJC/JJR DRAWN BY: PMM
DATE: MARCH, 2014

SHEET TITLE:
FIRE ALARM
RISER DIAGRAM

SHEET NO:
E-1.2
10286 / 1955 E-1.2



DEMOLITION NOTES:

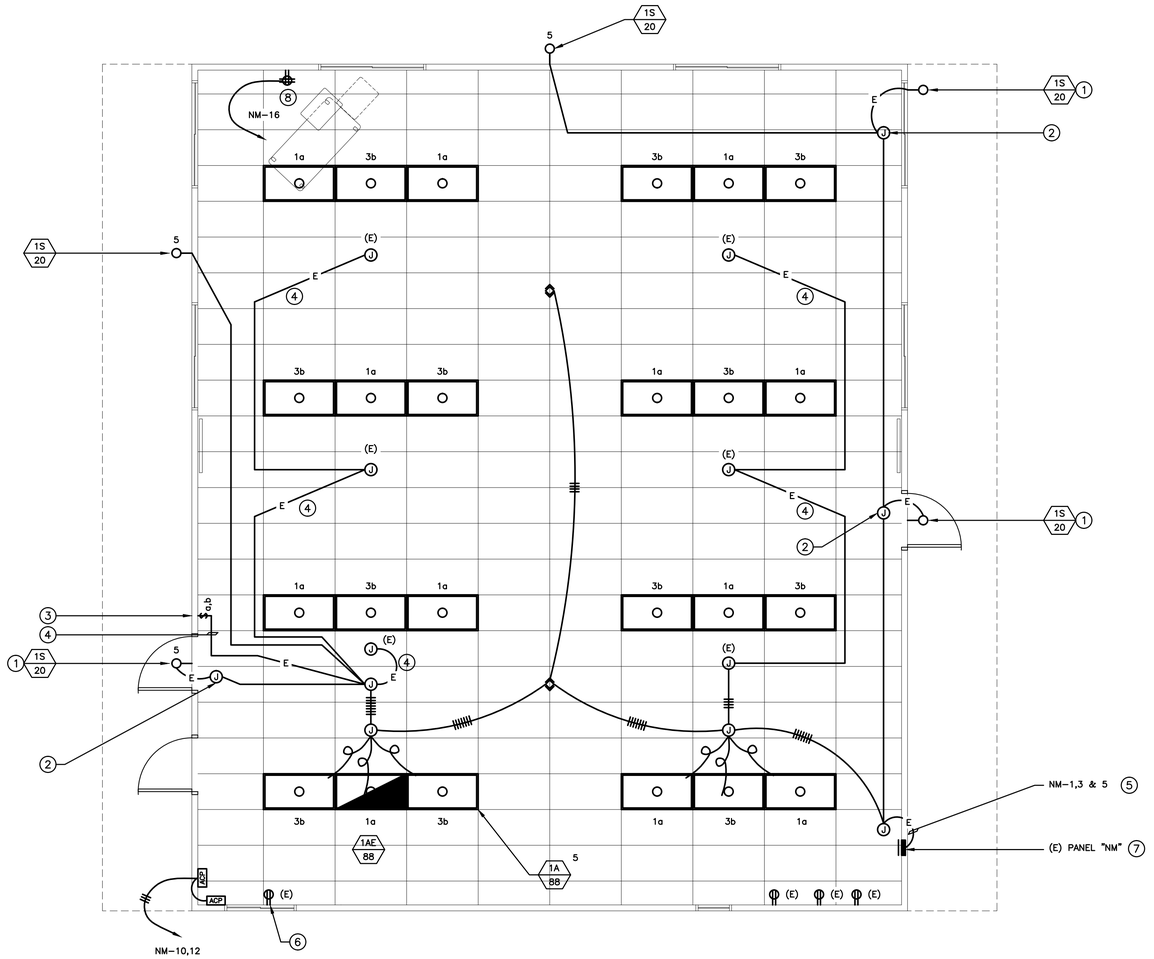
1. EXISTING EXPOSED CONDUIT AND CONDUCTORS TO REMOVED.
2. REMOVE ALL EXISTING UNUSED DATA CABLES.
3. REMOVE ALL LIGHT FIXTURES IN THIS ROOM.
4. REMOVE EXISTING DEVICE AND CONDUCTORS BACK TO CIRCUIT BREAKER AND PROVIDE BLANK COVER
5. EXISTING DATA RACK, DATA EQUIPMENT, FIRE ALARM CONDUIT AND FIRE ALARM CONDUCTORS TO BE REMOVED

NOTE:

1. ALL SWITCHES, ELECTRICAL DEVICES LOW VOLTAGE DEVICES CONDUIT, CONDUCTORS AND CABLES SHOWN ON THIS PLAN SHALL BE REMOVED UNLESS NOTED OTHERWISE
2. ALL DEVICES LOCATED IN WALLS TO BE DEMOLISHED SHALL BE REMOVED.

DEMOLITION FLOOR PLAN

SCALE 1/8" = 1'-0" (1)



LIGHTING PLAN NOTES:

1. REMOVE EXISTING LIGHT FIXTURE AND PROVIDE NEW AS SHOWN.
2. INTERCEPT EXISTING CONDUIT IN ATTIC SPACE, PROVIDE JUNCTION BOX AND EXTEND AS SHOWN.
3. REMOVE EXISTING THREE SWITCHES AND PROVIDE NEW AS SHOWN INCLUDE PLATE W/ BLANK FOR REMOVED THIRD SWITCH.
4. EXISTING CONDUIT REMOVE CONDUCTORS AND PULL IN NEW 3 #12
5. EXISTING CONDUIT REMOVE CONDUCTORS AND PULL IN NEW 5 #12.
6. REPLACE RECEPTACLE AND PLATE W/ NEW.
7. PROVIDE 20A/1P CIRCUIT BREAKER AND LABEL "TEACHERS DESK"
8. PROVIDE DUAL CHANNEL (SIZE AS REQUIRED) PLASTIC SURFACE WIREMOLD FROM CEILING DOWN WALL TO NEW OUTLET W/ REQUIRED MOUNTING ACCESSORIES.

ELECTRICAL LIGHTING AND POWER FLOOR PLAN

SCALE 1/4" = 1'-0" (2)

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Renovations

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2 DATE:
3 DATE:

CHECKED BY: JJC/JJR DRAWN BY: PMM
DATE: MARCH, 2014

SHEET TITLE:

DEMO, LTG AND POWER PLAN

SHEET NO:

E-3.0

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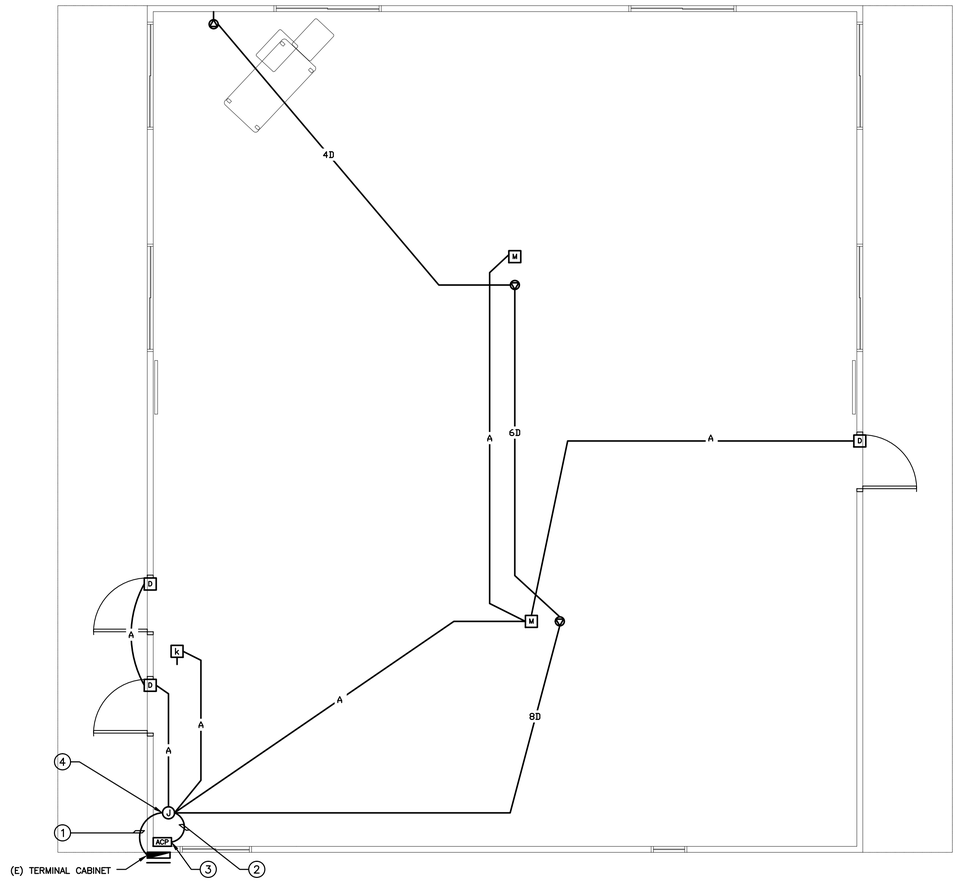


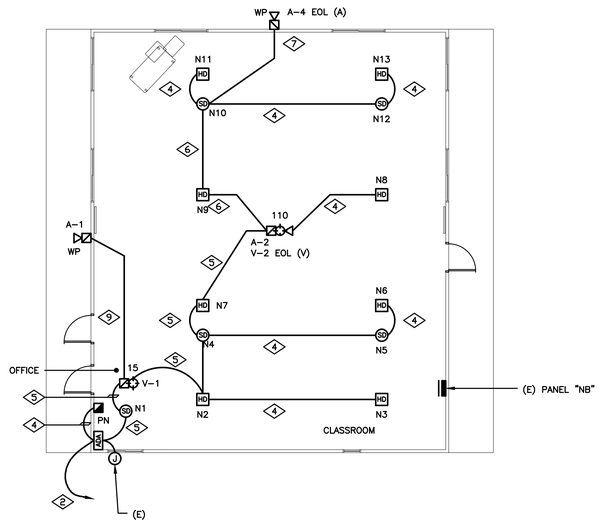
LOW VOLTAGE PLAN NOTES:

1. 2"C. (8) CAT 6 DATA CABLES, (1) 10-PAIR COMMUNICATION CABLE AND REQUIRED INTRUSION ALARM CONDUCTORS.
2. 1" (2) COMMUNICATION CABLES AND REQUIRED INTRUSION ALARM CONDUCTORS.
3. NEW INTRUSION ALARM CONTROL PANEL.
4. MOUNT IN ATTIC SPACE.

N

ELECTRICAL LOW VOLTAGE FLOOR PLAN

SCALE 1/4" = 1'-0" (1)



FIRE ALARM NOTES:

1. NEW ADA BOOSTER PANEL IN HINGED LOCKABLE CABINET MOUNT TO WALL AT CEILING LINE.
2. 1/2"C. 2 #12 & 1 #12 E/G. TO POWER PANEL PROVIDE 20A/1P CIRCUIT BREAKER AT PANEL W/ LOCK-ON DEVICE LABEL "ADA BOOSTER"
3. EXISTING CONDUITS, TO ATTIC SPACE, REMOVE CONDUCTORS AND PULL IN NEW (1) #6 TWISTED PAIR AND 8 #12 THWN.
4. 3/4"C. (1) #16 TWISTED PAIR.
5. 3/4"C. (1) #16 TWISTED PAIR AND 4 #12 THWN.
6. 3/4"C. (1) #16 TWISTED PAIR AND 2 #12 THWN.
7. 3/4"C. 2 #12 THWN.
8. 1"C. (1) #16 TWISTED PAIR & 8 #12 THWN,
9. 3/4"C. 4 #12 THWN.

NOTE:

ALL FIRE ALARM VISUAL DEVICES SHALL BE SYNCHRONIZED.

N

ELECTRICAL FIRE ALARM FLOOR PLAN

SCALE 1/8" = 1'-0" (2)

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Modulars II

Phase B

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LOW VOLTAGE AND FIRE ALARM PLAN

SHEET NO:

E-3.1

10286 / 1955 E-3.1

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NEMA 3R

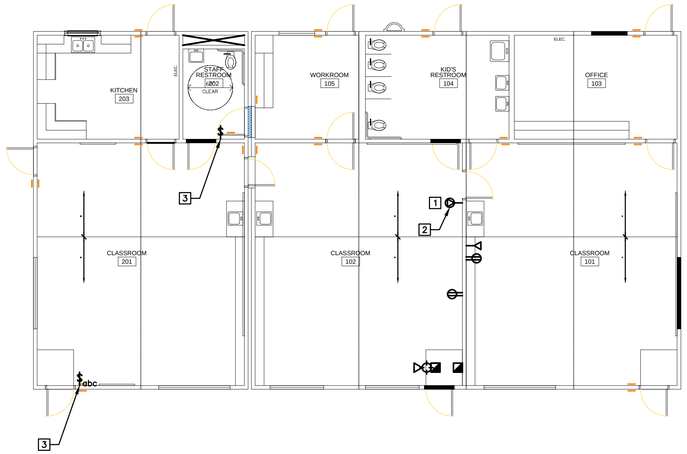
PANEL MCP	LOCATION: EXTERIOR WEST SIDE BLDG.	BUS RATING	120/208V. 3ø 4W
	MAIN: 100A/3P	100 AMP	MOUNTING: SURFACE

LOCATION	VOLTAMPS #A	VOLTAMPS #B	VOLTAMPS #C	CIR	BKR	A	B	C	BKR	CIR	VOLTAMPS #A	VOLTAMPS #B	VOLTAMPS #C	LOCATION
POWER POLE 201	900			1	20	*			20	2	600			COMPUTER 102
201		900		3	20		*		20	4		600		102
201			900	5	20			*	20	6			600	102
201	900			7	20	*			20	8	900			102
201		1080		9	20		*		20	10		900		102
201			900	11	20			*	20	12			600	102
201	900			13	20	*			20	14	600			102
201		900		15	20		*		20	16		900		102
COMPUTERS 102			900	17	20			*	20	18			900	102
102	900			19	20	*			20	20	900			102
102		600		21	20		*		20	22		900		102
102			600	23	20			*	20	24			600	102
102	900			25	20	*			20	26	900			102
102		900		27	20		*		20	28		600		102
*			–	29	–			*	20	30			900	102
*	–			31	–	*			20	32	360			TEACHER 102
*		–		33	–		*		–	34		–		*
*			–	35	–			*	–	36			–	*
*	–			37	–	*			–	38	–			*
*		–		39	–		*		–	40		–		*
*			–	41	–			*	–	42			–	*
SUB TOTAL														

EXISTING CONNECTED VA	=	48500 VA
NEW LOAD	=	260 VA
TOTAL PANEL LOAD	=	48760 VA
FEEDER AMPS	=	58.5 AMPS

NOTES:

(#) *
*
*
*



DEMOLITION NOTES:

1. EXISTING DEVICE AND JUNCTION BOX TO BE REMOVED.
2. EXISTING SURFACE CONDUIT AND CONDUCTORS TO BE REMOVED
3. COIL UP AND TAPE OFF CONDUCTORS IN BOX AND PROVIDE BLANK COVER PLATE AFTER DEVICES AND REMOVED.

NOTES:

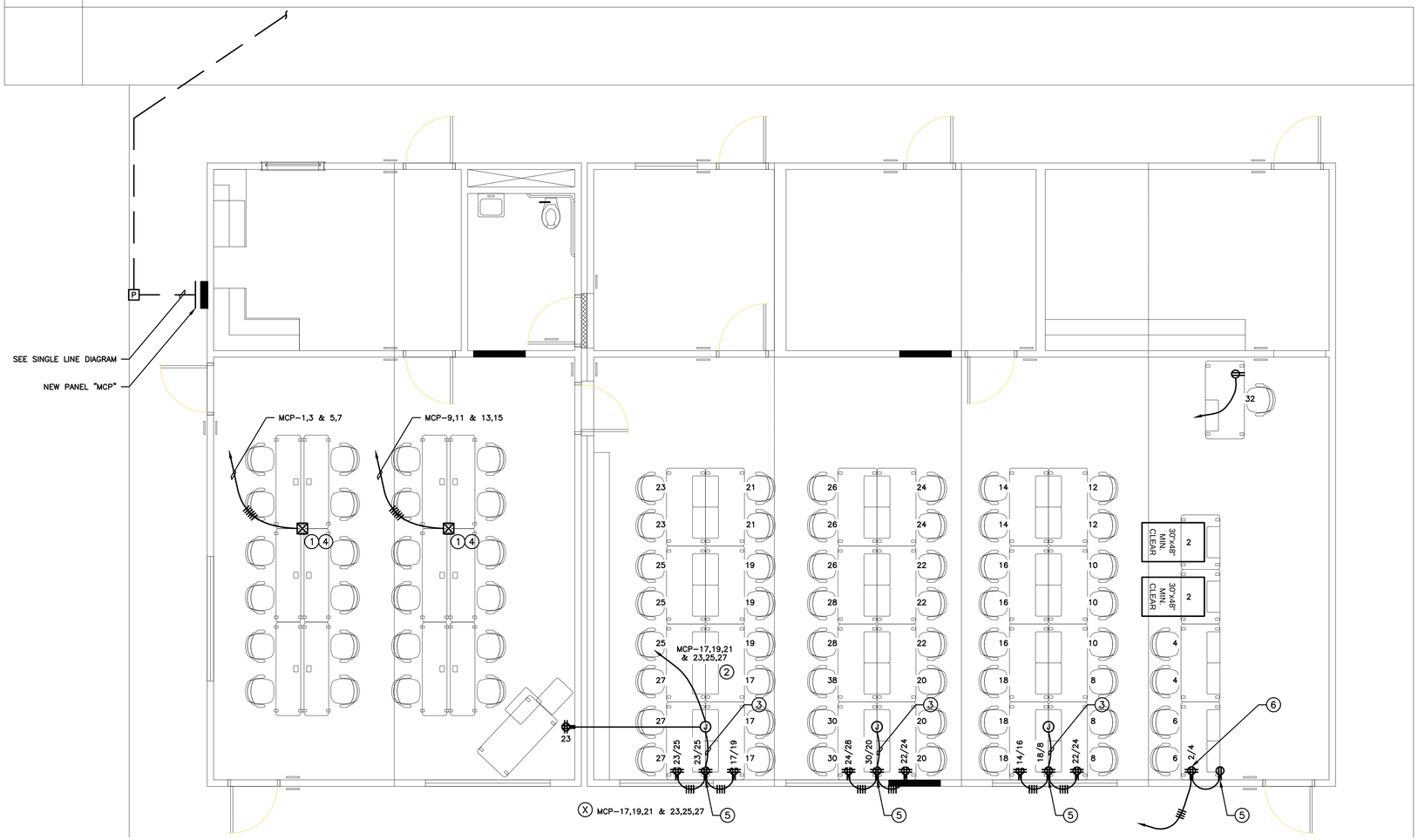
1. ALL SWITCHES, CONDUIT AND ELECTRICAL DEVICES SHOWN ON THIS PLAN SHALL BE REMOVED UNLESS NOTED OTHERWISE.
2. ALL EXISTING DATA CABLE SHALL COMPLETELY REMOVED.

DEMOLITION FLOOR PLAN

SCALE 1/8" = 1'-0" (1)

POWER PLAN NOTES:

1. PROVIDE DUAL CHANNEL STEEL POWER POLE (SIZE AS REQUIRED) W/ ALL REQUIRED MOUNTING ACCESSORIES, DATA CABLES AS SHOWN AND (12) DATA OUTLETS VERIFY CONFIGURATION W/ OWNER PRIOR TO ROUGH-IN.
2. 1 1/4"C. 8 #10 & 1 #10 E/G.
3. PROVIDE DUAL CHANNEL (SIZE AS REQUIRED) PLASTIC SURFACE WIREMOLD FROM CEILING DOWN WALL TO NEW OUTLETS W/ REQUIRED MOUNTING ACCESSORIES.
4. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.



ELECTRICAL POWER FLOOR PLAN

SCALE 1/4" = 1'-0" (2)

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SHEET TITLE:

DEMO AND POWER PLAN

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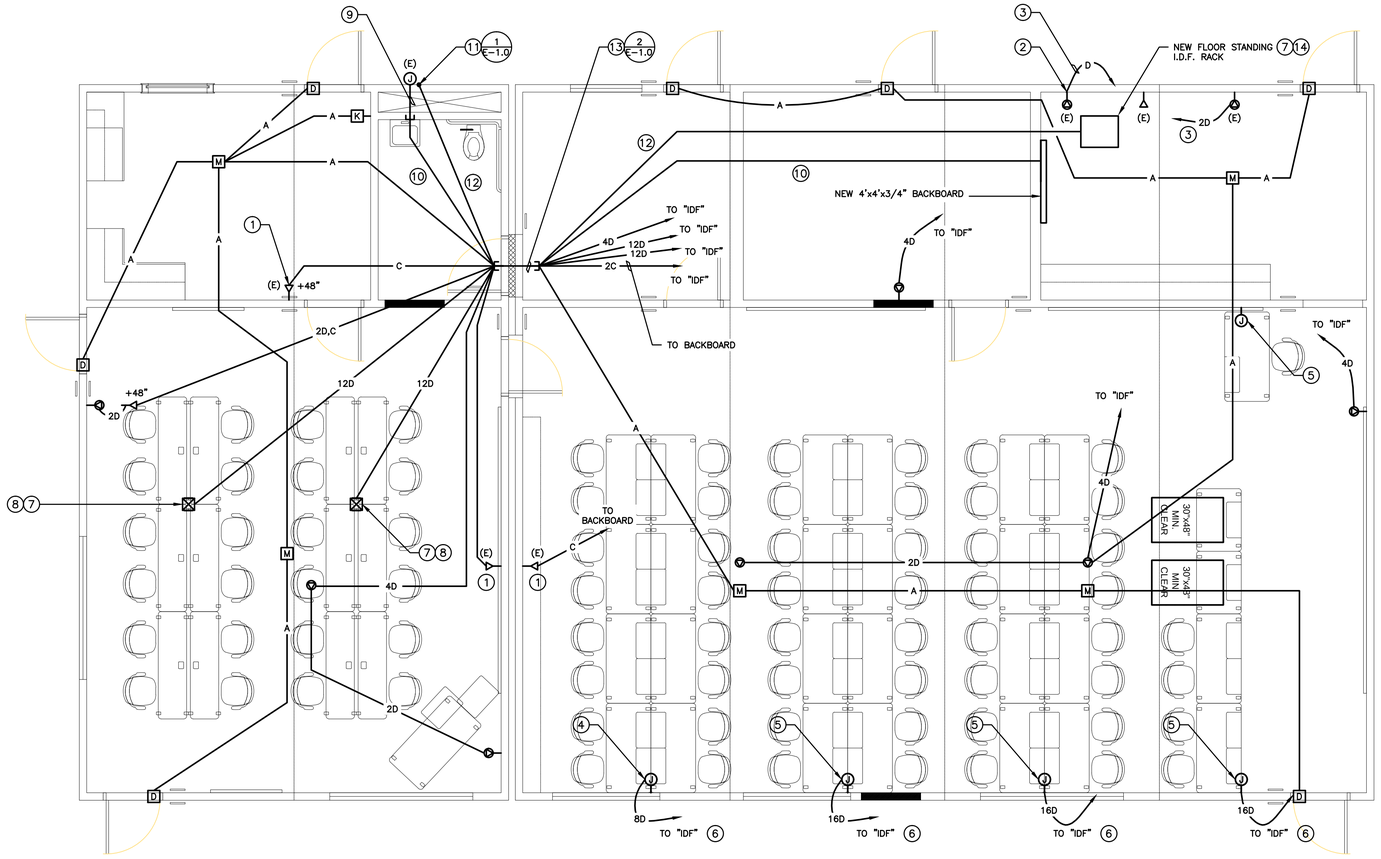


LOW VOLTAGE PLAN NOTES:

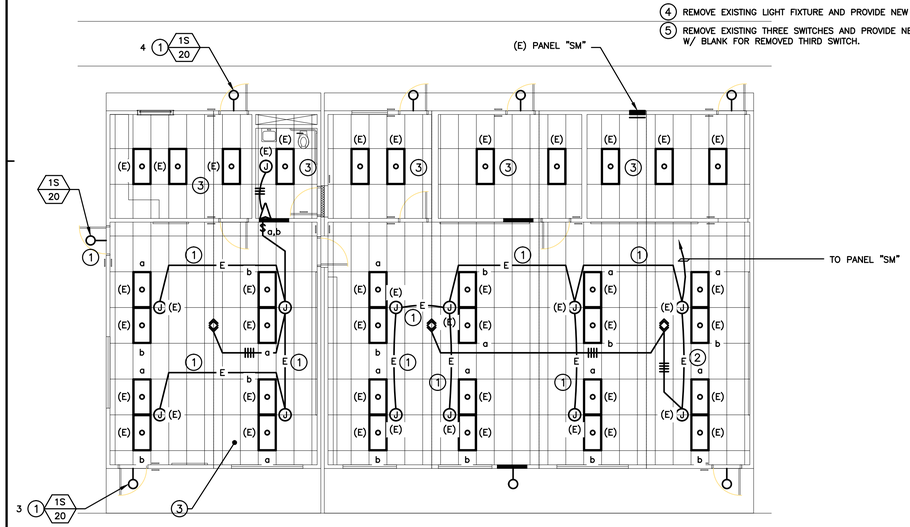
1. EXISTING COMMUNICATION OUTLET AND CABLE TO BE REMOVED AND REPLACED. PULL IN NEW CABLE AS SHOWN.
2. EXISTING DATA OUTLET BOX. REMOVE EXISTING OUTLETS AND INSTALL NEW DATA OUTLETS TO MATCH DENOTED NEW DATA CABLES.
3. REMOVE EXISTING DATA CABLES AND PULL IN NEW DATA CABLES AS SHOWN.
4. PROVIDE DUAL CHANNEL PLASTIC SURFACE WIREMOLD WITH (8) DATA OUTLETS. VERIFY CONFIGURATION AND HEIGHT W/ OWNER PRIOR TO ROUGH-IN.
5. PROVIDE OUTLET BOX(ES) W/ (16) DATA OUTLETS VERIFY CONFIGURATION W/ OWNER PRIOR TO ROUGH-IN.
6. PROVIDE DUAL CHANNEL (SIZE AS REQUIRED) PLASTIC SURFACE WIREMOLD FROM CEILING DOWN WALL TO NEW OUTLETS W/ REQUIRED MOUNTING ACCESSORIES.
7. VERIFY EXACT LOCATION PRIOR TO ROUGH-IN.
8. PROVIDE DUAL CHANNEL STEEL POWER POLE (SIZE AS REQUIRED) W/ ALL REQUIRED MOUNTING ACCESSORIES, DATA CABLES AS SHOWN AND (12) DATA OUTLETS VERIFY CONFIGURATION W/ OWNER PRIOR TO ROUGH-IN.
9. EXISTING COMMUNICATION CONDUIT REMOVE CABLES AND PULL IN NEW (1) 25-PAIR COMMUNICATION CABLE AND REQUIRED INTRUSION ALARM CONDUCTORS.
10. (1) 25-PAIR COMMUNICATION CABLE.
11. 2"C. W/ (1) 6 STAMP SINGLE MODE FIBER OPTIC DATA CABLE FROM EXISTING JUNCTION BOX TO NEW JUNCTION BOX
12. (1) 6 STAMP SINGLE MODE FIBER OPTIC DATA CABLE .
13. (4) 2"C. SLEEVE W/ LABELS AS SHOWN MOUNTED IN ATTIC W/ BUSH ENDS.
14. PROVIDE ALL REQUIRED MOUNTING ACCESSORIES AND GROUNDING REQUIREMENTS-PER SPECIFICATIONS.

ELECTRICAL LOW VOLTAGE FLOOR PLAN

SCALE 1/4" = 1'-0" (1)

LIGHTING PLAN NOTES:

1. EXISTING CONDUIT REMOVE CONDUCTORS AND PULL IN NEW 3 #12
2. EXISTING CONDUIT REMOVE CONDUCTORS AND PULL IN NEW 5 #12.
3. REPLACE LAMPS AND CLEAN LENS OF ALL LIGHT FIXTURE IN THIS ROOM REPLACE ANN FAULTY BALLAST AND ANY BROKEN CRACKED OR DISCOLORED LENS INCLUDE ALL COST IN BID.
4. REMOVE EXISTING LIGHT FIXTURE AND PROVIDE NEW AS SHOWN.
5. REMOVE EXISTING THREE SWITCHES AND PROVIDE NEW AS SHOWN INCLUDE PLATE W/ BLANK FOR REMOVED THIRD SWITCH.

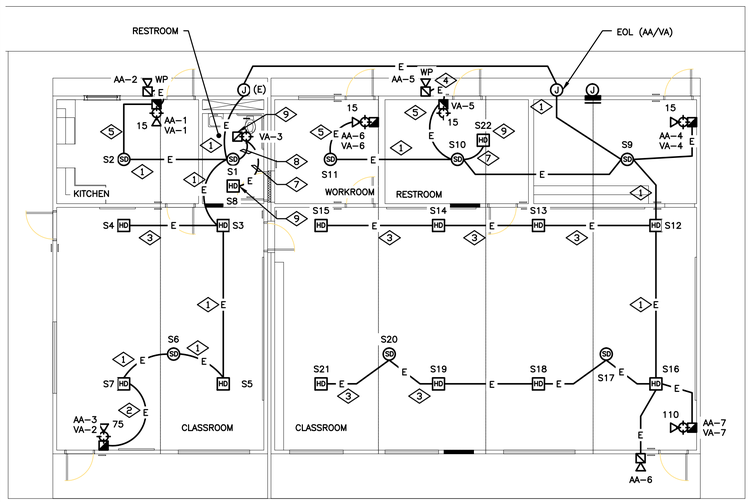


ELECTRICAL LIGHTING FLOOR PLAN

SCALE 1/8" = 1'-0" (3)

FIRE ALARM NOTES:

1. (1) #16 TWISTED PAIR AND 8 #12 THWN.
2. EXISTING CONDUIT REMOVE EXISTING CONDUCTORS AND PULL IN NEW 8 #12 THWN.
3. EXISTING CONDUIT REMOVE EXISTING CONDUCTORS AND PULL IN NEW (1) #16 TWISTED PAIR.
4. EXISTING CONDUIT REMOVE EXISTING CONDUCTORS AND PULL IN NEW 4 #12 THWN.
5. EXISTING CONDUIT REMOVE EXISTING CONDUCTORS AND PULL IN NEW 8 #12 THWN.
6. EXISTING CONDUIT REMOVE EXISTING CONDUCTORS AND PULL IN NEW (1) #16 TWISTEDD PAIR AND 4 #12 THWN.
7. 3/4"C. (1) #16 TWISTED PAIR.
8. 3/4"C. (1) #16TWISTED PAIR AND 4 #12 THWN.
9. DEVICE AND JUNCTION BOX.



NOTES:

1. ALL VISUAL DEVICES SHALL BE SYNCHRONIZED.
2. ALL FIRE ALARM DEVICES SHOWN ON THIS PLAN ARE NEW TO REPLACE EXISTING FIRE ALARM DEVICE AT SAME LOCATION UNLESS NOTED OTHERWISE

ELECTRICAL FIRE ALARM FLOOR PLAN

SCALE 1/8" = 1'-0" (2)

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Electrical Engineering & Consulting
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CONSULTANT:

REGISTERED PROFESSIONAL ENGINEER JOSEPH J RUDOVICZ No. E 11795 EXP. 9/30/14 ELECTRICAL STATE OF CALIFORNIA

CLIENT:

NC STEM Center
Modulars II

Phase B

Interior Renovations

RCCD | RIVERSIDE COMMUNITY COLLEGE DISTRICT

APPROVALS:

REVISIONS:
1 DATE:
2 DATE:
3 DATE:

CHECKED BY: JJC/JJR DRAWN BY: PMM
DATE: MARCH, 2014

SHEET TITLE:
L.V. LTG. AND FIRE ALARM PLAN

SHEET NO:
E-4.1

10286 / 1955 E-4.1

RIVERSIDE COMMUNITY COLLEGE DISTRICT

RESOLUTION DESIGNATING CERTAIN PRODUCTS, BRANDS, AND SERVICES

RESOLUTION NO. 08-13/14

WHEREAS, Pursuant to Public Contract Code Section 3400(c), the Riverside Community College District ("District") may make a finding that designates certain products, things, or services by specific brand or trade name for the statutorily enumerated purposes, and

WHEREAS, District Staff has reviewed the District's current facilities, general contracts, plans, and specifications in order to evaluate the District's need to establish uniform, complete and compatible maintenance service systems and technology systems district wide in order to facilitate the most reliable, dependable, cost efficient and feasible education for students in the District, and

WHEREAS, based on the Board's above described review and Public Contract Code Section 3400(c), the Board has determined that the District must require and specify the use of certain products, things, or services on District projects as found below, and

NOW, THEREFORE, THE BOARD DOES HEREBY RESOLVE, DETERMINE, AND ORDER AS FOLLOWS:

Section I. The District, in accordance with Public Contract Code Section 3400(c), has made a finding that a particular material product, thing, or service designated by specific brand or trade name will be designated in order to match other products in use on a particular public improvement either completed or in the course of completion.

Section 2. The District, pursuant to Public Contract Code Section 3400(c), intends to establish uniform, complete and compatible control, management and monitoring systems, equipment, materials and products district wide in order to facilitate the most reliable, dependable, cost efficient development of District facilities and programmatic activity.

Section 3. The District has found compatibility, cost, and utility of other available systems to be problematic and believes it is necessary to establish complete District systems to avoid incompatibility issues, as well as durability and reliability issues, and costs associated with experimenting, replacing incompatible and useless system parts/components, and to avoid the waste of District funds associated with addressing incompatible components, equipment, materials, and products.

Section 4. The District and its consultants have undertaken considerable research into the products/brands utilized by the said system, which would properly serve the District's administrative and educational purposes.

Section 5. The District's existing facilities already utilize specific products/brands relating to the said system. The District's findings contained herein are made to match those existing systems

currently in the District, and to avoid the cost of designing and engineering systems and components that may not be compatible, could never be made compatible or could only be made compatible after expending considerable District resources and funds.

Section 6. Pursuant to Public Contract Code Section 3400(c), the District's Governing Board desires to designate several proprietary systems and products for the District's use in order to match items in existing projects to establish one complete district wide system, avoiding incompatibility of products and systems.

Section 7. In addition to the need to establish a district wide system to ensure the compatibility of existing parts to new District parts, the District, pursuant to Public Contract Code Section 3400(c), also intends to establish uniform standards for the listed product and system for the following reasons:

A. Irrigation Control System – *Hunter Irrigation Controls* are necessary for the District's Riverside City College and Norco College maintenance service system because:

   a. The systems installed are proprietary and not interchangeable with other systems.

   b. The District has a considerable investment in the existing system.

   c. These products limit the need for additional staff training in operation and repairs of the existing mechanical systems.

B. Irrigation Control System – *Rain Bird Irrigation Controls* are necessary for the District's Moreno Valley College maintenance service system because:

   a. The systems installed are proprietary and not interchangeable with other systems.

   b. The District has a considerable investment in the existing system.

   c. These products limit the need for additional staff training in operation and repairs of the existing mechanical systems.

C. Key Cylinder Systems – *Corbin Key Cylinder Systems* are necessary for the District's maintenance service system because:

   a. The systems installed are proprietary and not interchangeable with other systems.

   b. The District has a considerable investment in the existing system.

   c. These products limit the need for additional staff training in operation and repairs of the existing mechanical systems.

D. Elevators – *Otis Elevators* are necessary for the District's maintenance service system because:

a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. These products limit the need for additional staff training in operation and repairs of the existing mechanical systems.

d. The district will benefit from the economies of scale for maintenance contracts.

E. Energy Management System – *WebCTRL by Automated Logic* is necessary for the District's Energy Management System because:

a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. This product limits the need for additional staff training in operation and repairs of the existing mechanical systems and associated software.

d. The district will benefit from the economies of scale for maintenance contracts.

F. Card Access – *C-Cure Card Access System by Software House* is necessary for the District's card door access system because:

a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. This product limits the need for additional staff training in operation and repairs of the existing mechanical systems and associated software.

d. The district will benefit from the economies of scale for maintenance contracts.

G. Fire Alarm System – *Notifier Fire Alarm Panels* are necessary for the District because:

a. This system and its component parts have already been installed District wide and are monitored by the Colleges Facilities Departments. This product limits the need for additional staff training in operation and repairs.

b. This system is integrated into our District wide fire alarm monitoring system, is fully functional at all campuses, and it integrates campuses, enhancing safety and control.

c. Introducing another product for new or renovated buildings will greatly reduce the built-in capabilities of the system. If another product was introduced, it would be a stand-alone

system and would not be integrated into the existing system.

Section 8: The designation of certain products/brands contained herein shall be effective until the District determines the certain products/brands contained herein need to be revised. At that time, District staff will review the products/brands and recommend to the Governing Board either re-adoption or discontinued use of the designated products/brands. The Governing Board shall then consider the recommendations and re-approve or discontinue the designation of the products/brands contained herein and/or approve additional/replacement products/brands as determined by the Governing Board.

ADOPTED this 10th day of December, 2013.

President, Board of Trustees

RIVERSIDE COMMUNITY COLLEGE DISTRICT

RESOLUTION DESIGNATING CERTAIN PRODUCTS, BRANDS, AND SERVICES

RESOLUTION NO. 30-13/14

WHEREAS, Pursuant to Public Contract Code Section 3400(c), the Riverside Community College District ("District") may make a finding that designates certain products, things, or services by specific brand or trade name for the statutorily enumerated purposes, and

WHEREAS, District Staff has reviewed the District's current facilities, general contracts, plans, and specifications in order to evaluate the District's need to establish uniform, complete and compatible maintenance service systems and technology systems district wide in order to facilitate the most reliable, dependable, cost efficient and feasible education for students in the District, and

WHEREAS, based on the Board's above described review and Public Contract Code Section 3400(c), the Board has determined that the District must require and specify the use of certain products, things, or services on District projects as found below, and

NOW, THEREFORE, THE BOARD DOES HEREBY RESOLVE, DETERMINE, AND ORDER AS FOLLOWS:

Section I. The District, in accordance with Public Contract Code Section 3400(c), has made a finding that a particular material product, thing, or service designated by specific brand or trade name will be designated in order to match other products in use on a particular public improvement either completed or in the course of completion.

Section 2. The District, pursuant to Public Contract Code Section 3400(c), intends to establish uniform, complete and compatible control, management and monitoring systems, equipment, materials and products district wide in order to facilitate the most reliable, dependable, cost efficient development of District facilities and programmatic activity.

Section 3. The District has found compatibility, cost, and utility of other available systems to be problematic and believes it is necessary to establish complete District systems to avoid incompatibility issues, as well as durability and reliability issues, and costs associated with experimenting, replacing incompatible and useless system parts/components, and to avoid the waste of District funds associated with addressing incompatible components, equipment, materials, and products.

Section 4. The District and its consultants have undertaken considerable research into the products/brands utilized by the said system, which would properly serve the District's administrative and educational purposes.

Section 5. The District's existing facilities already utilize specific products/brands relating to the said system. The District's findings contained herein are made to match those existing systems currently in the District, and to avoid the cost of designing and engineering systems and components that may not be compatible, could never be made compatible or could only be made compatible after expending considerable District resources and funds.

Section 6. Pursuant to Public Contract Code Section 3400(c), the District's Governing Board desires to designate several proprietary systems and products for the District's use in order to match items in existing projects to establish one complete district wide system, avoiding incompatibility of products and systems.

Section 7. In addition to the need to establish a district wide system to ensure the compatibility of existing parts to new District parts, the District, pursuant to Public Contract Code Section 3400(c), also intends to establish uniform standards for the listed product and system for the following reasons:

A. Uninterruptable Power Systems (UPS) and Power Distribution Units (PDU) – *American Power Conversion (APC)* are necessary for the District's network electronics power backup systems because:

   a. This system and its component parts have already been installed District wide and are monitored by Information Services' Network Support Department.

   b. The District has a considerable investment in the existing systems.

   c. These products limit the need for additional staff training in operation and repairs of the existing mechanical systems.

B. Cable Fiber – *Corning* Cable Fiber and Certified Parts are necessary for the District's fiber infrastructure because:

   a. The District has a considerable investment in the existing system.

   b. These products limit the need for additional staff training in operation, maintenance, and repairs of the existing infrastructure.

   c. These products avoid the cost of designing and engineering systems and components that may not be compatible.

C. Audio-Visual Floor boxes – *FSR* are necessary for the District's audio-visual infrastructure system because:

   a. The systems installed are proprietary and not interchangeable with other systems.

   b. The District has a considerable investment in the existing system.

   c. These products limit the need for additional staff training in operation and repairs of the existing audio-visual systems.

D. Audio-Visual Wall Plates/Connectors – *Extron* are necessary for the District's audio-visual infrastructure system because:

   a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. These products limit the need for additional staff training in operation and repairs of the existing audio-visual systems.

d. The district will benefit from the economies of scale for maintenance.

E. Audio-Visual Wall boxes – *Extron* are necessary for the District's audio-visual infrastructure system because:

a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. These products limit the need for additional staff training in operation and repairs of the existing audio-visual systems.

d. The district will benefit from the economies of scale for maintenance.

F. Audio-Visual Connectors – *Extron* are necessary for the District's audio-visual infrastructure system because:

a. The systems installed are proprietary and not interchangeable with other systems.

b. The District has a considerable investment in the existing system.

c. These products limit the need for additional staff training in operation and repairs of the existing audio-visual systems.

d. The district will benefit from the economies of scale for maintenance.

Section 8: The designation of certain products/brands contained herein shall be effective until the District determines the certain products/brands contained herein need to be revised. At that time, District staff will review the products/brands and recommend to the Governing Board either re-adoption or discontinued use of the designated products/brands. The Governing Board shall then consider the recommendations and re-approve or discontinue the designation of the products/brands contained herein and/or approve additional/replacement products/brands as determined by the Governing Board.

ADOPTED this 18th day of March, 2014.

President, Board of Trustees